MONELL

RHEUMATISM,
ACUTE AND CHRONIC

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A PRIZE ESSAY.

BY

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At the Annual Meeting of the Orange County Medical Society, May, 1843, it was resolved to offer a Prize, annually, for the best Essay on some Medical subject.

The first Topic proposed was *Acute and Chronic Rheumatism*, and the prize was subsequently awarded to the accompanying treatise.

The restricted limits of an Essay like the present, renders it necessary to discuss briefly, several parts of the subject, which, under other circumstances, should be more fully examined. I have aimed accordingly at brevity; and though omitting nothing intentionally, of real *practical* value, have necessarily omitted much of Physiological interest. For this reason, the Essay is not offered as a complete or thorough examination of the subject; but as a condensed outline which may at some other time be filled.

RHEUMATISM.

The painful nature of this disease—the frequency of its occurrence—its occasional obstinacy, and more particularly its intimate connexion with disease of the Heart, attaches importance to its consideration, and recommends it to the careful study of every practical Physician.

CAUSES OF RHEUMATISM.

Is it hereditary ? This question has been extensively discussed, and it has been generally believed that the children of Rheumatic parents, are more liable to Rheumatism than others. This influence however is not as frequent as was formerly supposed.

1. It is stated by Chomel, that of 60 Rheumatic patients, 36 had parents who had suffered from Rheumatism. It cannot then be considered as *necessarily* hereditary : yet the children of Rheumatic parents, may, under favorable circumstances, be more subject to the disease.

2. *Previous attacks*, are mentioned as a strong predisposing cause. Of 45 examples of acute Rheumatism taken indiscriminately, 17 occurred in persons who had suffered previously by the

disease, (*Budd.* 1.) In regard to Chronic Rheumatism, there is no doubt that previous attacks exert a strong influence.

3. *Intemperance,* may also operate as a cause, though perhaps not with great frequency. Yet I have had more than one instance, in which individuals who had been severely afflicted by chronic Rheumatism, were entirely and permanently relieved by strictly observing temperate habits. I have no doubt that the Rheumatic diathesis, in a large number of persons, is kept up by intemperance in eating and drinking.

4. *Sex.* Hall says *acute* Rheumatism is more frequent in males, and *chronic* in females, (2.)—Of 45 cases, fourteen only were women, (*Budd.*) Other observers have recorded nearly the same results. The greater liability of men is however owing, probably, to being more exposed to exciting causes.

5. *Age.* According to a table kept in the Hospital La Charite, persons from 15 years of age to 30, would seem most subject to Rheumatism. Of 73 cases, 35 were between 15 and 30 years —22 were between 30 and 45—7 were between 45 and 60—7 were over 60, and 2 under 15—(*M. Chomel.)* Cullen and Gregory think it is more frequent from puberty to 35. Dr. Scudamore says from 15 to 30 for acute, and from 30 to 60 for chronic. Eberle extends the period as

(1.) Library of Practical Medicine, American Edition, vol. iii. p. 565.

(2.) Hall on Diagnosis, p. 23.

most liable to acute Rheumatism from 7 to 45 ; aged persons, he thinks, are rarely affected by acute Rheumatism, but are especially liable to the chronic variety. Young persons and adults, are far more subject to acute Rheumatism than the more advanced in life, while those who have passed middle age more frequently suffer from chronic rheumatism. Rheumatism occurs rarely during infancy. Scudamore thinks infants are entirely exempt from it ; but Eberle has seen it in infants under 2 years. Dr. Heberden, (1) mentions an instance in a child 4 years of age. Dr. Davis, (2) says he has seen it in children of 4, 5, 6 and 7 years. Elliotson, Watson, and others have observed the same.

6. *Cold and Damp, or changeable weather* are frequently exciting causes, which every writer admits, and every observing practitioner must have noticed ; Elliotson and others say these are the only causes. Rheumatism is therefore more frequent during the spring and autumn months, than during either summer or winter. Some have noticed it more frequently in autumn. Others have observed it more frequent in the spring.— These opinions are easily reconciled, when we consider that the same damp, changeable weather prevails at both seasons. Cold alone, the clear cold of winter, does not seem so injurious. *(Dungleson)* Yet a late writer advances an op-

(1). Commentaries, p. 400.
(2). Med. Chir. Review, Oct. 1827.

posite opinion, *(Forry.)* (1.) The influence of seasons and climate however is still an interesting field of inquiry.

7. *Disorder of the Stomach, Liver, and Bowels,* may be an exciting cause of Rheumatism, though more frequently of the chronic than the acute.

8. *Suppressed habitual discharges,* are mentioned as exciting causes, though probably with little reason.

9. *The abuse of Mercury.*

10. *The Gonorrheal,* and more especially the *Siphilitic taint* are strong predisposing causes, though there is less evidence of their being strong exciting causes.

11. *Malaria,* is said to be a strong exciting cause. *(Prout. 2.)* There is certainly no disease more under the influence of changes in the weather than some forms of Rheumatism; what these changes are, is still far from being settled. It may be *malaria,* or, it may not. The frequent intermittent character of Rheumatism, would seem to encourage the idea that malaria has more or less influence in its production. Elliotson, speaking of the complications of Ague, says, "I am not acquainted with a more frequent occurrence than that of Ague being followed by severe Rheumatic pains in the extremities, or, in the head."

[1.] The climate of the United States, and its endemic influences. By Samuel Forry, M. D., New York: J. & H. G. Langly, 1842. pp. 272-273.

[2.] Prout on Stomach and Urinary Diseases.

It is also stated that Rheumatism may occur as a sequel to continued fever; in this case it is confined for the most part to the shoulders, and lasts but a week or so. *(Christison.)*

To ascertain the exact condition of the atmosphere most active in producing Rheumatism, and especially chronic Rheumatism, would be a most interesting and useful investigation.

PATHOLOGICAL CHARACTERS.

It but rarely happens that opportunities occur for examining the texture of joints while affected with acute Rheumatic inflamation; the disease being seldom fatal, except by translation to some internal and vital organ. In these instances, the joints are recovered some time before death.—Such being the case, it is not surprising that Practitioners should differ as to the exact seat of articular Rheumatism. Some have supposed, that Rheumatism was nothing more than acute inflamation of the lining membrane of the arteries.—Macintosh says, he has seen cases which appeared, after death to be inflamation of the Lymphatics. Others think the inflamation confined to the Fibrous Structure primarily, but extending,by contiguous sympathy, seccondarily to the other Tissues. Dr. Clutterbuck defines Rheumatism "To be an inflamation of the ligamentous Structure connected with the different joints and covering the muscles attached to them." Such is also the opinion of Bichat. Dr. Scudamore re-

gards the tendinous portions of the muscles as the seat; others admit it may occur either in the muscular or Fibrous Structure, (*Hoffman*, *Leroy*, *Chomel*, *Pinel*, *&c.*) Again, it is argued that the essential seat of Rheumatism is in the muscles alone. *(Dr. C. Smyth.)* At one time, the disease was supposed to be an inflamation of the arteries of the muscles and tendons; such was the opinion of M. Barde, M. M. Dalbant, and Vaidy.—Balfour considered it a peculiar inflamation of the cellular Structure.

From this varied evidence, we may conclude, that Rheumatism though generally attacking the fibrous tissues, (1) is not confined *exclusively* to any particular structure.

At times no decisive and invariable appearances are met with on dissection; at other times the veins around the articulations have been found congested. The Ligaments, Periosteum, and Synovial membrane, may be injected and thickened, and occasionally false membranes are found in the Synovial capsules. Even small collections of matter, have been found in the surrounding cellular Structure, and accumulations either of Pus or Serum in the Synovial cavity. *(Andral.)* The fact then, is that articular Rheumatism may be severe, and even protracted, and yet cause no actual disorganization of any Structure; or,

[1] These comprehend the articular capsules, or synovial membrane, the Ligaments, the Aponeuroses, tendons, sheaths of tendons, Periosteum, Pericardium, Dura mater, Sclerotica; and to these Burdin adds the Stomach, Intestines, Bladder and Uterus.

the articular Structures may, any, or all of them, become, in the course of the attack, secondarily affected.

PROXIMATE CAUSE.

The general condition of the constitution, or rather the *Proximate cause* of Rheumatism, has always been a matter of discussion. By earlier writers it was attributed, almost universally to a peculiar morbific or *Rheumatic* matter in the Blood. Cullen supposed it to arise from an inflammatory state of the Blood, in connexion with a peculiar phlogistic condition of the muscular Structure ; Richter, that it was irritation arising from retained perspirable matter, "*materia perspirabilis retenta*," (*Specialle Therapie, vol. ii. p.* 18.) Scudamore considered it a disease *sui generis*, and strictly of a specific character. Dungleson thinks it to be "*more neuropathia than ordinary Inflamation.*"

All authority, however varied on other points, agree in this, that Rheumatism may begin as irritation, and cause no derangement of Structure, yet in its further progress may change to Inflamation and produce various morbid alterations. The point I would wish particularly to urge, while on this division of the subject, is, that this Irritation is more frequently (if not always) present in the *commencement* of Rheumatism, both acute and Chronic, than is generally supposed. This view I consider of importance, because, from it result

some of the most useful indications for favorable treatment.

There is often, then, I think *primarily*, a Nervous Irritation, not as some have supposed, of the nervous filaments of the seemingly diseased parts, *(Macintosh,)* nor a Neuropathia, *(Dungleson,)* of any kind, having its seat in the joints, but, *an Irritation at the origin of the nerve or nerves, supplying the inflamed parts.*

I say, I think this condition to exist *primarily* in most instances; the joints themselves, (and I speak of the joints because this location is most frequent) which at this time, though the seat of acute pain, are not as yet, the seat of actual *disease*; while, it is equally certain, that the joints may become secondarily affected. The disorder if suffered to go on unchecked, may implicate one or more of the articular structures as seriously and as extensively, as if they had been *primarily* diseased; the Spinal symptoms will then be less manifest, but not less important.

Yet it should be borne in mind that this "Spinal Irritation" may, especially in nervous subjects, and more particularly in females, be itself secondary, and caused by disorder in some other part of the system. It is important to recollect this in the treatment.

The primary seat of Rheumatism then, may be at the root of the nerve, while the more open manifestation of its presence is in the ter-

minating filaments, indicated by pain, and if acute, by tenderness and swelling. These remarks are fully substantiated by accurate observers. Teale strongly avows it, (1.) Such is also the opinion of Dr. J. K. Mitchell of Philadelphia, (2) and Dr. R. H. Thomas of Baltimore. (3) Several others also advocate the same view. Dr. Griscom of New York, says " Rheumatism, Acute and Chronic, I think may be set down as the most common of the specific diseases depending upon an irritation of the Spinal nerves." (4) Eberle admits it to exist in some cases of Chronic Rheumatism. (5) This view of the case is still further strengthened by the fact that metastasis often occurs in Rheumatism ; a fact that is also true of Spinal irritation stimulating other diseases. Speaking of this liability to metastasis, Dungleson quoting the opinion of Macintosh, says " this mobility has given rise to the opinion among many that the disease is essentially seated in the nervous system, and that the Sanguiferous is affected secondarily." Abundance of other evidence might be adduced to prove that the proximate cause of *simple uncomplicated Rheumatism*, may be nervous ; and there is abundant evidence from my own observation and the experience of others, to satisfy my mind that the *primary* proximate cause

[1] Treatise on Neuralgic Disease, &c. by Thomas Pridgin Teale. Carey & Hart, Philadelphia, 1830.
[2] Maryland Med. Recorder, Vol. ii, p. 523.
[3] Archives of Med. & Surg , Vol. i, p. 189.
[4] New York Jour. of Med. & Surg , April, 1840, p. 320.
[5] Practice of Medicine, 4th Edition, Vol. i., p. 402.

is not only nervous, but in almost every instance is "Spinal Irritation." This view of the subject will be further noticed when speaking of the *symptoms*. That Rheumatism may and does depend on irritation of the nerve at its root, is further proved by the effects of remedies, as will be shown when speaking of the *Treatment*.

SYMPTOMS.

However numerous and contradictory opinions may be as to the proximate cause of Rheumatism, there is happily agreement in regard to the important characteristics of the disease. The symptoms are few, generally well marked and constant.

Rheumatism is commonly described as Acute and Chronic. Another variety, the *sub-acute*, is mentioned by some as a species of the acute, and by others as a species of the chronic form. It probably matters but little under which head the condition termed *sub-acute* is included; it may with equal propriety be considered a mild form of an acute attack or a more active form of chronic. I consider acute, sub-acute, and chronic Rheumatism as but different grades of the same Pathological condition. Acute Rheumatism has also been divided into two varieties—*a fibrous or diffused and synovial. (Chambers, Hawkins.)* The former commences *near* the joint; the latter *in* the joint. In the *fibrous* it is said the fever runs high, and all the symptoms are more acute. In

the *Synovial*, the fever is either less from the beginning, or moderates soon after the joints swell. Rheumatism of the Heart is stated to be less frequent in the Synovial variety. This however is not sufficiently established, neither is the division of practical importance. Employing, then, the usually received divisions we commence with

ACUTE RHEUMATISM.

We may, as a matter of curiosity notice a few of its Synonyms.

Rheumatismus, Rh. acutus imflamatorius, Rh. Callidus, Rh. hypersthenicus, Arthrosia acuta, Myitis, Myositis, Cauma Rheumatismus, Arthritis Rheumatismus, Synocha Rheumatica, Febris Rheumatica inflamatoria, Rheuma, Rheumatic Fever, Acute articular Rheumatism; Fr. Rheumatisme, Rh. aigu, Fievre Rhumatismale; Ger. Entzundlichfieberhaften Rheumatismus. (1)

PREMONITORY SYMPTOMS.

An attack of acute articular Rheumatism is preceded, usually, by a similar series of symptoms as other Phlegmasia, such as a sensation of cold—perhaps a chill,—heat succeeds, but does not extend always over the whole body. In such as are subject to the complaint, there may be, previous to the attack, general soreness, or rigidity of the muscular system. Symptoms of de-

[1] Dungilson. &c.

ranged Liver and Bowels, loss of appetite, and depression of spirits are sometimes present.

SYMPTOMS OF ATTACK.

An attack of acute Rheumatism generally presents a state of active fever, (and what is somewhat singular, this never degenerates into Typhus,) with inflamation of one or more of the joints, and generally the Fibrous Tissue of the joints, or, it may be in other Fibrous structures. "Sometimes the pain precedes the fever, but in other cases the fever appears first, and the local affection is not discovered until some days afterward." *(Good.)* It would be probably nearer the truth to say that, in most cases, the general symptoms precede the local. But whether the general fever precedes or attends the local inflamation, it always increases as the local affection becomes fully established. "The parts affected with Rheumatic Inflamation are swollen, red, and extremely painful—the slightest pressure or motion causing the utmost degree of suffering." *(Eberle.)* The pain is also more severe at night, and is generally aggravated by warmth.

Blood drawn presents the buffy coat.

The Pulse is full, frequent, and strong—but not hard. It might be called *round, expanded, rheumatic.*

The Skin is hot, and this heat is of a peculiar character; it is sharp and burning; yet sweat is

oftentimes very abundant, but without being critical or reducing the heat of the skin. It then has a peculiar acid smell, and is almost invariably of an acid quality, as has been shown by analysis. (1)

The Tongue is generally moist, and covered with a whitish fur, which, in the progress of the disease, may change to brown.

Thirst, generally, is urgent.

The Bowels. In regard to the condition of the bowels there is difference of opinion. Some say they are constipated, others say costive, but easy moved, while others have found them either regular or easy moved. Either of these conditions may occur under different circumstances, or in different constitutions. In simple acute Rheumatism unaccompanied with any complication, they would probably be regular, while those whose observations are derived mostly from Hospital and Dispensary practice would frequently find costiveness.

Urine. The state of the urinary secretion is not described with sufficient accuracy. One speaks of the urine as scanty, high colored, and clear; another, as scanty but depositing a sediment; another, as being copious and depositing a lateritious sediment; another says, "the urine is thick and deposits a copious sediment which is always acid." Others with more minuteness of

[1] Dr. Chambers and Mr. Wigan, Medico. Chirurg. Review, Ap. 1828, p. 176.

observation state, that generally it is scanty and high colored in the commencement of the attack, but becoming more copious as the disease advances, and then usually depositing a sediment especially in the decline of the disease. The urine during an attack of Rheumatism, is also said to contain a remarkable quantity of uric acid. *(Andral.)*

Head ache is rare, unless in extreme cases when there may be also delirium. Watson says there is no delirium except Carditis takes place, when it may be violent. (p. 806.)

TENDERNESS OF THE SPINE.

This is a symptom to which reference was made when speaking of the Pathology of Rheumatism. Briefly—when any part is affected with acute Rheumatism, pressure on the Spine at the origin of the Nerve or Nerves, which are distributed to the diseased part, will increase the pain in that part. This symptom has been carefully noticed by a few, superficially by several, but totally neglected by the great majority of Practitioners.

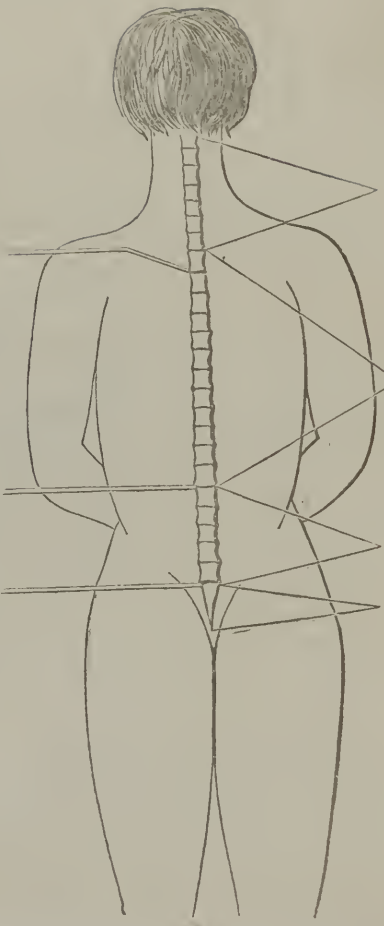
It would be foreign to the subject to discuss the existence or non-existence of Spinal Irritation as a disease *per se*, or to review at length the anatomy of the Nervous system. It is sufficient for the present purpose to recollect that Nerves proceed from the Spinal column—eight

Above the line *a* is included the origin of nerves distributed to the head, neck, shoulders, arms, and upper part of the chest.

Between *a* and *b* is included the origin of nerves distributed to the chest and abdomen.

Between *b* and *c* is the origin of nerves distributed to the lumbar region and lower limbs.

Below *c* are nerves from the sacrum, distributed to the hips, pelvis, pelvic organs, and lower limbs.



pairs from the Cervical region—twelve from the Dorsal, five from the Lumbar, and five or six from the Sacral. The eight Cervical and first Dorsal form the Cervical and Brachial Plexus, and are then distributed to the Head, Neck, Shoulders, Arms and upper part of the Chest.—The Dorsal Nerves are distributed to the Arms, Chest and Abdomen, and by means of the great sympathetic, are connected with all the internal organs in the Dorsal region. The five Lumbar Nerves are distributed to the Lumbar region and lower limbs. The five or six Sacral are distributed to the Hips, Pelvis, Pelvic organs and lower limbs. The accompanying diagram illustrates the outline of this distribution.

I repeat, that when acute Rheumatism attacks any part, the pain of that part is increased by pressure on the Spine at that point from whence the nerves distributed to the diseased part arise. (The Spine itself is also occasionally tender, yet not necessarily so.) If there be an attack of acute Rheumatism of the knee joint, pressure on the Lumbar or Sacral vertebræ will increase the pain in the knee; if the disease appear in the arm, pressure on the lower Cervical or upper Dorsal vertebræ will increase the pain in the arm, and so also of other parts. If the attack has been protracted and severe, other complications may more or less disguise the Spinal symptoms,—but this does not lessen their importance, they should be carefully sought for and removed; we will then

know just how much actual disease we have yet to subdue.

I am not prepared at present, neither is it necessary to explain the exact Pathology of this symptom. It is sufficient that it *is* a symptom—a symptom, the existence of which is fully proved by abundant observation. I also believe it to be a symptom as constant in its occurrence as almost any other. I will not assert that it is present in every instance, but I can most confidently affirm that I have found it present in every case of simple Rheumatism, (since my attention has been directed to this point) which was seen early in the attack. In most cases the symptom continues prominent throughout, though as already stated it may be more or less disguised by complications. It should also be borne in mind that the Spine is tender, *only on pressure.*

The pressure should be made with care, over the Spinous processes of the vertebræ—over the transverse processes, and between the vertebræ themselves. This care in examination is frequently essential, for without it we may overlook the object of our search. A careless examination will not detect tenderness in a single nerve ; it is only where the tenderness is somewhat extensive that a hasty touch causes pain. Occasionally *pressure* does not cause pain as readily as slight *percussion.* In all cases of doubt the clothing should be removed from the back, and each vertebræ and each intervertebral space carefully examined. *If any*

spot is found which on pressure or percussion, causes an increase of pain in the part apparently affected with Rheumatism, that is the seat of disease.

It is of much importance to attend to this symptom, for, even though it may not always exist, yet, when it does exist, it furnishes one of the most useful and unfailing indications for successful treatment ; but of this we will speak in the proper place. We next notice the

LOCATION

of acute Rheumatism. We have already seen that Rheumatism may seize upon any tissue, but generally the Fibrous, and for the most part the Fibrous tissue of the *joints*, and more frequently the large joints than the smaller ; or it may extend rapidly from one joint to another, until al most every portion of the body appears to be implicated. The joint attacked by acute Rheumatic Inflamation, soon becomes swollen, tense, elastic, red and intensely painful on the least motion. The swelling is more remarkable in the smaller joints than in the larger. This swelling is said to arise from the sudden effusion of Lymph or Serum, in the cellular membrane, and is thought to afford relief. This is not strictly correct. If the effusion is *serum*, then there is generally relief, if *lymph*, the symptoms are often aggravated. The first is *Œdematous*, the latter, *Elastic.* (*Dewees.*) At times, however, the suffering may be intense with but little redness or

swelling. "If the bursæ be the seat of inflamation, there will be considerable swelling, but scarcely any discoloration of the skin, and sometimes not the slightest alteration in this particular. If the Tendons and Ligaments be affected, there is more or less redness of the surface, which is usually of a vivid color, and is often in patches." *(Scudamore.)* (1) Besides this variety, or *Articular*, acute and external Rheumatism may be

Hemicrania—of the Head.

Pleurodyne—of the Thorax.

Abdominal—of the parietes of the Abdomen.

The mere name of these varieties indicates the seat, and the only point of importance in this place, is to urge the necessity of diagnosis between acute inflamation of these parts and Rheumatism. To do this requires only caution and ordinary judgment and skill. This, however, will be referred to again under the head of Metastasis and Diagnosis. Besides these external forms of Rheumatism, it may also exist internally either originally, or as a complication, or by metastasis. It is then

Of the Meninges of the Brain.

" Iris. (2)

" Pleura and Lungs.

" Sclerotica. (3)

" Pericardium and Heart.

" Pleura and Diapraghm.

[1] Treatise on the nature and cure of Rheumatism, p. 20.
[2] Lawrence on diseases of the Eye, Phil., 1843, p. 406.
[3] Ditto, p. 325.

Of the Peritoneum.

" Stomach and Bowels.

" Liver.

" Uterus.

" Bladder, &c. &c.

There are several other species noticed by different writers, a separate description of which, however, is of but little practical utility. If we understand the general history and character, of Rheumatism we will be prepared to meet and recognise it wherever it may be located. (1.)

METASTASIS.

One of the most important features in Rheumatism, and especially acute Rhematism, is the metastasis or translation of the inflamation, to some other part than that originally attacked; when this translation is to internal organs or structures, it often becomes alarming and occasionally fatal. The Inflamation may suddenly leave the part first affected, and pass immediately to the

[1] A variety called *Eruptive Rheumatic Fever*, Scarlatina Rheumatica. Exanthesis Arthrosia. Dingee, Dunga, Bucket Fever, &c. is described as occurring in the Carribean Islands, whence it spread to the West Indies, and the Southern coast of the United States.—The symptoms were inflamatory Fever—pain of the Joints and muscles; on the second or third day, the fever and pain declined; the attack terminating in a copious perspiration, and sometimes also a rash or miliary eruption. On the 3rd or 4th day, the symptoms returned in nearly the same order, but with increased severity. It was rarely fatal The treatment used was bleeding, cathartics and anodynes. (*Dung'eson Pract of Med*) About the same time (the summer of 1828—9) a similar disease by many considered Rheumatic, prevailed at Paris. It was called by the indefinite name *Acrodynia*. The most prominent symptoms were pain in the wrists and ankles. It is stated at length in "*Med. Essays by Chapman, Dungleson, &c.*" Vol. 1, p. 194. See also *American Journal of the Medical Sciences*, 1828, p. 777.

Heart, Diaphragm, Stomach, Bowels, Brain, and in short to almost any sensible part of the body. This may take place without any evident cause, or it may be driven from its original location, by cold or improper remedies.

A very important, and, at the same time, a frequent metastasis, is to the *Fibro. serous Tissues of the Heart.* The alleviation or entire subsidence of pain in the part first affected, and the supervention of morbid symptoms in internal structures, should always be watched with care. The occurrence of dyspnœa, palpitation, partial syncope, pain and anxiety about the cardiac region, with a feeble and rapid pulse, should lead us to examine carefully for cardiac inflamation, and to meet it by prompt and active treatment. We must not forget, however, that disease of the Heart may *attend* Rheumatism of other parts: indeed this seems to be very generally the case.

The connexion between disease of the Heart and Rheumatism, was first noticed, according to Dr. Wells, (1) by Dr. David Pitcairn in 1788. Dr. Baillie was the first who published on the subject in 1794. (2)

The introduction of Auscultation and Percussion as a means of diagnosis, opened a new field of investigation; and the connexion of Rheumatism with disease of the heart, is now one of its

[1] Transac. of a Soc. for the imp. of Med. & Surg. Knowl., Vol iii, p. 372.

[2] "Morbid anatomy of some of the most important parts of the Human body.

most important features. Dr. Cox of St. Guy's Hospital thinks that the majority of organic diseases of the Heart in young people, are connected with Rheumatism. Bouillaud says, that one half of those who suffer from Acute Articular Rheumatism, also suffer from Pericarditis.—(" *Clinique des Maladies du Cœur.*") Such is also the estimate of Hope, Pennock and others. Of 92 cases carefully noted of Pericarditis and Endocarditis, 31 were connected with acute articular Rheumatism. Dr. Hope says, that " In acute Rheumatism there is no more common and formidable source of danger than inflamation of the Heart and its investing membranes. Should it be overlooked when existing in a severe form, (and even in that form it is, to those unacquainted with auscultation, one of the most obscure and insidious of maladies,) the patient almost invariably dies from the immediate effects of the attack, or, becomes a short-lived martyr to an incurable organic disease of the Heart." (1)— And again, after enumerating the frequency of other causes of Pericarditis, he adds, " *And, far above all acute Rheumatism.*" (2) Elliotson says, " The first thing connected with Rheumatism is Pericarditis." (3)

The chance of the Joint affection being complicated with Rheumatic Carditis is said to be greater in proportion as the patient is younger.

[1] Hope on Diseases of the Heart, Phil. 1842, p. 24.
[2] Ditto. " " p. 184.
[3] " Elliotson's Practice," Phil, 1844, p. 827.

Watson says that, " with perhaps one exception, I never knew the disease occur in an unequivocal form before puberty, without it being attended with inflamation of the lining or investing membranes of the Heart." (3) Without admitting that this is *always* the case, we have sufficient authority and experience for asserting that in most cases of Rheumatism, and especially in youth, we may expect cardiac disease.

In this view of Rheumatism what increased importance is attached to its consideration. Before the aid of auscultation and percussion was invoked, Rheumatic Carditis was supposed to occur by *metastasis* alone. But we now know that inflamation of the Pericardium, valves, &c., may proceed to a fatal termination, and yet the inflamation of the joints persist with unabated intensity. It is also important to remember that the Heart symptoms may abate for a time, and the disease continuing latent, in a chronic form, induce incurable organic disease. We cannot therefore watch too closely the physical signs of Pericarditis and alteration of the valves. Indeed there is strong reason to suppose that many cases of organic lesions of the Heart, and more especially of the valves, which finally become incurable, were preceded and caused by Rheumatic Inflamation. Dr. Elliotson says, " I make it an invariable rule to examine the cardiac region, by the touch and hearing, in every case of acute Rheumatism." (page 829)

[1] " Watson's Practice of Physic," Phil. 1844, p. 808.

It is true that Rheumatism of the Heart is not often *immediately* fatal, though it often lays the foundation of future irreparable mischief. The rational symptoms are not always urgent, or if urgent, frequently lose much of their severity in a few hours, "The dyspnœa and oppression are alleviated; the palpitation and pain remit, and subsequently occur only when the patient coughs, or, if at other times, for very short intervals.—After this period there is seldom any thing very alarming in the general symptoms: often the patient is tranquil and unembarassed in manner, and nowise suspects that he is affected with disease of a vital organ." (*Budd*) There is no doubt that many practitioners—and especially those unacquainted with auscultation (1) and percussion—will feel inclined to deny that diseases of the Heart from all causes, are as prevalent as is here stated from Rheumatism alone. But I may remark that the frequency of diseases of the Heart are by no means properly estimated among country practitioners, with whom Post Mortem Examinations, are comparatively exceedingly rare.—Concerning diseases of the Heart, Corvisart remarks, "I do not hesitate to advance that the most frequent organic diseases, Phthisis Pulmonalis excepted, are those of the Heart." (2) Dr.

(1) I know not how it may be in the cities, but I regret to acknowledge that many Physicians in the country of acknowledged skill, and in good standing in the Profession are not only ignorant of Auscultation and Percussion, but actually ridicule those who employ them as a means of Diagnosis.

[2] "Essai Sur les Maladies, et les Lesions Organiques du Cœur, et des Gros Vaisseaux."

Clendining observes that of more than 500 cases of dissections, about one third presented evidence of Heart disease. We cannot err therefore in directing particular attention to this organ.

The remarks of Dr. Watson on this subject, though referring to the neighbourhood of London, apply equally to this country. He says,—"In by far the majority of instances, however, it takes place in connexion with acute articular Rheumatism. The frequency of this complication, in those persons at least who suffer Rheumatism in London is very remarkable.—The heart is found to be more or less involved in the disease, in not less than one-third of all the patients admitted with acute Rheumatism into our hospitals. Of *rheumatic carditis* it has been noticed, 1. That its proper symptoms are often unheeded by the patient amid the severer pains that affect his limbs, and may easily be overlooked by the practitioner who does not vigilantly search for them: 2. That when the cardiac symptoms are well marked, or being but slightly marked have been looked for and detected, they generally cease in a great measure, or entirely with the cessation of the joint disease they accompany, or that those signs which remain (as unnatural sounds) are not of a kind to induce evident distress, or to claim the attention of the patient: 3. That nevertheless the organ seldom (according to the writer's belief, never) reverts to its former state, or undergoes complete

repair ; but the structural changes left by the inflamation form the germ of further changes, progressive in their character, and ultimately destructive of life.

Rheumatic endocarditis is more common than rheumatic pericarditis. Each tends gradually to produce such conditions of the heart as occasion dropsy ; and it may be worth while, in our endeavour to analyse and trace home these conditions, that we should consider for a moment the manner in which the consecutive changes are brought about.

When in the course of rheumatic fever, inflamation befals the lining membrane of the heart, it affects chiefly the valves ; and especially (but not exclusively) the valves of the left side of the heart ; and most constantly of all the sigmoid valves of the aorta.

It will at once be seen how these valves, by their being thickened, or shrivelled, or puckered, or rendered stiff by their adhesion to neighbouring parts, by their ulceration or perforation, may have their peculiar functions permanently injured ; so that they are apt to become, on the one hand, an obstacle to the free passage onwards of the blood, or incapable, on the other, of effectually preventing its backward passage. Hence an imperfect emptying of the chamber that precedes the seat of the special alteration ; hence continued striving, and hypertrophy, and ultimately, according to the degree and place of these

changes, an extension of disease towards the right side of the heart.

Again, when acute pericarditis is set up, the inflamed membrane either adheres—partially it may be, but more often at all points—to the heart, or it does not adhere. If it does not, the patient dies in the primary attack. If it does, all signs of cardiac disease may disappear. But the seed of future mischief has been sown ; *hæret lateri lethalis arundo* ;* the free movements of the heart are fettered by the adhering bag ; the muscle is urged to stronger or more frequent contractions ; and this is aided by the effects of the endocarditis, which probably never fails to accompany in some degree the inflamation of the outer membrane. Hence, again, the extension of disease in the direction contrary to that of the blood.

When these facts are taken into account, they will serve to explain how it is, that when we come to examine a patient labouring under manifest disease of the heart, we so very often trace, in his history, one or more attacks of acute Rheumatism. They who have not been in the habit of putting the question as to this point, would be surprised at the number of such cases. When the articular Rheumatism was present, the heart affection was perhaps unnoticed, or, if noticed, the patient, as he and his medical attendant are apt to think, got quite well ; and when, at length, unequivocal symptoms of organic disease of the

* The deadly arrow remains fixed in the side

heart force themselves upon our attention, its Rheumatic origin is too often unsuspected or forgotten." (1)

Disease of the Heart is said to be less frequently connected with chronic Rheumatism than the acute. This is doubtful.

The period at which Cardiac disease comes on, varies from the 8th to the 27th day. *(Budd.)*

I had not intended to have described the symptoms of Rheumatic Carditis, but such is the importance of the subject, that they cannot well be entirely omitted. I have endeavoured therefore, as briefly as possible, to note a few of the most prominent phenomena, but would most earnestly urge upon every one, and especially the brethren of the Profession in the country, to examine the subject at their leisure, minutely and carefully.

In other parts of this essay, I have constantly endeavored, when adopting the opinions or language of others, to give due credit. In this part however, which relates to the symptoms of Rheumatic Carditis, I have used freely both the opinions and language of such writers as best conveyed the idea I wished to express. These authors are chiefly, Hope, [2] C. B. J. Williams, [3] Bouillaud, [4] Elliotson, [5] Watson, [6]

[1] Library of Practical Medicine, Phil. Ed. Vol. iii, p. 474.
[2] "Diseases of the Heart," &c. Philadel., 1842.
[3] "Lectures on Diseases of the Chest," 1835, and "London Med. Gazette," 1838.
[4] "Clinique des Maladies de Cœur."
[5] "Practice of Med." and "Diseases of the Heart."
[6] "Practice of Med."

Budd, [1] Gerhard, [2] Andral. [3]—With this general acknowledgment, we proceed to notice the symptoms of

RHEUMATIC CARDITIS.

General Symptoms.

The more common and constant general symptoms are: sudden pain in the præcordial region, palpitation attended with a difficulty of breathing, and a sense of oppression at the epigastrium. The præcordial pain sometimes extends to the left Hypochondrium; is generally increased by pressure upwards against the Diaphragm, or on the intercostal spaces; by a full inspiration, and by lying on the left side. The breathing is also quicker than natural, and this difficulty of breathing may be considerable. Difficulty of breathing is one of the most constant symptoms of Rheumatic Carditis, and when the dyspnœa comes on suddenly, and without discoverable disease of the Lung, or its lining membranes, it is a symptom of great value.

The Pulse is usually increased in frequency and often is small and irregular, particularly if there is much effusion. There is also often stiffness and pain about the left shoulder, and shooting thence down the arm. This latter symptom is more constant however in *Chronic* affections of the Heart.

[1] "Library of Practical Medicine."
[2] "Diagnosis and Diseases of the Chest," &c.
[3] "Clinique Medicale."

In addition to the above, we may briefly state another symptom, described at length by Dr. Watson, and by him and others considered a very important one. The symptom is stupor, or delirium, sometimes quiet, but often wild and furious, not dependent upon any disease of the encephalon. He says, "Patients laboring under Rheumatic Carditis frequently become affected with delirium, or violent mania, or stupor and coma, or convulsions, or all of these in succession, and you might suppose they were laboring under inflamation of the Brain, or its membranes. Such cases are in fact spoken of as cases of *metastasis* to the Brain. It may be so, nay, I know that it sometimes *is* so, but not often. Again and again when death has occurred, and the delirium had been extreme, no traces of disease have been discoverable within the skull, while marks of violent and intense inflamation were visible in the Pericardium." (1)

In all these cases there were certain general points of similarity. In all of them the Pulse was extremely rapid ; the delirium though violent and active at intervals, was characterized for the most part, by a singular and as it seemed a perverse taciturnity.

Each of these symptoms occur in different individuals, but they seldom all concur in the same case. If they did there would be no difficulty in the Diagnosis, neither would the disease

(1) Practice of Physic, Phil. 1844, p. 614.

be so often overlooked. Not unfrequently nearly all these symptoms are wanting, or are indistinctly marked. And they often lose much of their severity during the 24 hours which follow their accession. The dyspnœa and oppression are frequently alleviated, the palpitation and pain remit, and subsequently occur only when the Patient coughs, or, if at other times, for very short intervals.

After this period, if the disease is not fatal, there is seldom any thing alarming in the general symptoms ; the Patient, and too often the Physician, are blinded as to the extent of the Cardiac disease. The distress having ceased, the disease is considered cured, perhaps at the very time it is most certainly and surely progressing, and producing organic lesions, which last through life, causing frequent distress, and often in the end, sudden death.

Such then being the occasional uncertainty of the general symptoms, it is important to ascertain what aid may be derived from the

Physical Signs.

The Abnormal Sounds which attend the action of the Heart, vary in character, according as the Rheumatic inflamation occurs in the investing, *(Pericarditis)* or in the lining membrane, *(Endocarditis.)*

The Physical Signs of these affections are derived from two sources, *Percussion* and *Auscultation*. The Physical signs of

Pericarditis.

are generally plain and well marked, if the attack be severe.

Percussion. Very soon after the commencement of the disease, a dull sound is elicited on percussion in the Præcordial region; the extent of this dulness compared with the deficiency of sound observed by Auscultation, very accurately defines, in simple cases, the degree of the effusion. It may extend over the greater portion of the left side of the Chest, and even a little to the right of the Sternum. But in those cases where the effusion is limited to coagulable lymph and that in small quantity; or, where the serous effusion is inconsiderable, dulness may not be observed. If the effusion amounts to 9 or 10 ounces—and it commonly exceeds this,—the results of percussion will be usually very important, if not altogether decisive.

The occurrence of Pleurisy, or Pleuro—pneumonia, as a complication, might cause some embarrassment, and perhaps lead to erroneous conclusions, if we trusted to Percussion alone. This difficulty however will be readily overcome by a careful comparison with the sounds derived from Auscultation. Varying the position of the Pa-

tient from an upright to a recumbent posture, will also aid much in the diagnosis.

If there be much effusion within the Pericardium, *inspection* and *measurement* will detect fulness of the left side, under the lower part of the Sternum, in the region of the Heart. If the quantity of fluid effused is inconsiderable, or limited to coagulable lymph, we cannot expect to meet this prominence in a marked degree. The impulse of the Heart will be of course distant, feeble, irregular and unequal in proportion to the amount of the effusion.

Auscultation. In simple Pericarditis the morbid sounds result from attrition of the opposite inflamed surfaces of the Pericardium, and vary, according to the nature and extent of the effusion. These sounds are attended with a vibratory tremor, generally perceptable to the hand placed over the Heart. These phenomena exist only in the commencement of Pericarditis, before any considerable effusion has taken place; or, in cases in which there is effusion of lymph alone; or, in cases of considerable serous effusion, the morbid sounds may return as the fluid is absorbed, and the roughened surfaces of the Pericardium again come in contact.

The Friction sounds of Pericarditis are almost always double, accompanying the two normal sounds of the Heart, and in correspondence with the movements of the organ backward and forward, within the Pericardium. These sounds are usually first heard over the base of the Heart,

that is,—near the centre of the Sternum, a little to the left of the mesial line. The character of the Friction sounds vary, as might be supposed, according to the degree of firmness and roughness of the lymph, the quantity of fluid with which it is mixed, and the violence of the Heart's action. They often resemble, and should be carefully distinguished from the murmurs of valvular disease.

We have then very early in the attack, a faint *rubbing* or *rustling sound (bruit de frottement,)* or, as it is more happily termed by several English writers, a *to-and-fro sound*. It conveys to the ear, the notion of the rubbing of two rough surfaces, backwards and forwards upon each other. It usually seems near to the ear, and therefore near to the surface of the Patient's body. As already stated, this sound varies much in tone and degree. Sometimes it closely resembles the noise made by a saw in cutting a board, again it is more like the action of a file, or a rasp, or a nutmeg grater, &c. For a more particular account of these various sounds, and the explanation of the cause, see the authors above-mentioned, especially Hope and Williams. But the essential characteristic, in every tone and variety, is that of *alternate rubbing,—to-and-fro.*

If there succeeds sufficient effusion to prevent attrition of the opposite surfaces of the Pericardium, these morbid sounds will of course cease —while at the same time, the natural sounds of the Heart are diminished in clearness, and seem

remote and stifled, but may still be heard distinctly at the top of the Sternum. In this case, the morbid sounds return, as the fluid is absorbed and the natural sounds again become distinct in the præcordial region.

The period during which the Physical Signs of Pericarditis continue varies much in different cases, and depends on the rapidity with which the affection proceeds to a favorable or fatal termination. In most cases, however, the friction sounds last from a week to a fortnight, but as the disease yields, gradually become less loud and more limited, and finally cease. The fluid is now absorbed or converted into a false membrane, which connects the Heart with the Pericardium.

The general symptoms usually subside long before the Physical signs disappear. The rubbing sound, though occasionally absent in ordinary Pericarditis, is never absent in the Rheumatic form, and when carefully compared with the signs elicited by Percussion, will afford to a careful observer, the means of correct Diagnosis.

Such is a brief statement of the Physical signs as caused by simple Rheumatic inflamation of the Pericardial Sac. But Rheumatic Pericarditis does not usually occur in this simple, uncomplicated form. In almost every case, and by some it is stated, that in every case of Rheumatic Pericarditis, inflamation of the lining membrane of the Heart *(Endocarditis)* is also present. In some cases, the Physical signs of inflamation

of the internal membrane, exist, even *before* the friction sounds appear, but in all cases they continue after the proper signs of Pericarditis have disappeared.

In Rheumatic inflamation of the Heart, we have then, in addition to the signs already mentioned, the Physical signs caused by inflamation of the lining membrane, and especially of the valves, constituting

Endocarditis.

This is stated to be more frequent as connected with Rheumatism, than even Pericarditis.—It is far less obtrusive in its symptoms, but far more serious in its consequences. The signs of its existence therefore, should be carefully studied, that it may be detected, and vigorous treatment adopted, before serious mischief occurs.

The General Symptoms of Endocarditis do not vary to any considerable extent from those already noticed. There is usually less *pain*, but equal or greater *uneasiness*, resulting from the obstruction in the orifices of the Heart. This uneasiness may be trifling, or in cases of severe and extensive obstruction to the current of the blood, the uneasiness and distress may be extreme.—The Pulse is often small, feeble, and intermitting or jerking. In the first onset of the disease, the action of the *Heart itself* is usually strong, and

in this respect often presents a remarkable contrast to the feebleness of the pulse. The action of the heart may be strong, and yet owing to obstruction at the aortic valves, but very little impulse will be communicated to the artery at the wrist; or, if the aortic valves do not close the mouth of the vessel, there will be regurgitation of the blood into the ventricle during its diastole, thus causing a jerking sensation to the arterial pulsations. A decidedly weak and irregular pulse evinces great mitral contraction or free regurgitation. A decidedly jerking pulse denotes free aortic regurgitation. It is very evident that these symptoms are caused only by disease in the left side of the Heart. Inflamation of the valves of the right side, and especially Rheumatic inflamation is however exceedingly rare.

These varieties of arterial pulsation should be distinguished from similar conditions caused by Hysteric or Neuralgic diseases. This requires only ordinary discrimination.

Physical Signs of Endocarditis.

Percussion. During the acute stage of Endocarditis, there is considerable augmentation in the extent of dullness on percussion in the Præcordial region. This dullness, however, differs from that resulting from Pericardial effusion by the beat of the Heart remaining quite superficial, while in the latter it is remote and indistinct. In Pericardial inflamation this dullness is caused, it

will be recollected, by effusion. In Endocarditis, it is caused by sanguineous congestion ot the Heart itself; and this accounts for the fact, that although there is dullness on percussion, the beat of the heart is still near and distinct, instead of being feeble and distant. But we derive our most important Physical signs of inflamation of the lining membrane from

Auscultation. This makes known to us one of the most constant and characteristic of the phenomena of Endocarditis,—*the bellows sound—("bruit de soufflet")* in its various modifications, the intensity of which increases with the vehemence and rapidity of the Heart's action, and the greater obstruction of orifice. Occasionally it is like the action of a file ; then it is called a "*rasping sound*"—*("bruit de rape")* Sometimes it is like the action of a fine saw,—*("bruit de scie.")* The term " preternatural sound" as proposed by Elliotson, strictly speaking, is a better generic term for embracing all these varieties.

The sounds then proceed from valvular affections. " The primitive alterations consist in effusion, from the surface of the valvular apparatus, of lymph, which subsequently becomes organized. On the broad surface of the valves this lymph often assumes the form of false membrane ; but on the chordæ tendinæ and the edges of the valves, it is disposed in the form of grains, which vary in size from a pin's head to a millet seed.

These granulations are sometimes confluent; at others, discrete or isolated; and often stud, like a string of beads, the parts we have mentioned. It has been correctly remarked by Dr. Watson, that on the aortic valves they often form a double festoon, following a natural line of division in the structure of those valves. The consistence of these morbid productions varies with their date: at first their substance is soft and friable, and of grayish colour, adhering very slightly to the lining membrane: as organization proceeds they become more solid, of a nearly white colour, and adhere so intimately to the subjacent membrane as to make one body with it; the grains now resemble, very exactly, syphilitic vegetations, and ultimately acquire cartilaginous hardness. The valves themselves are thickened and opaque, have lost their natural pliancy, and are sometimes puckered. In some cases lymph accumulates about the base of the valves in considerable masses, which occupy a large space in the cavity of the heart. This creates immediate and great impediment to the circulation, and dilatation and hypertrophy follow often with great rapidity."

These alterations, as already stated, affect principally the valvular apparatus of the left side of the Heart, owing to its more tendinous structure. These morbid conditions distend the valves, and thus by contracting the orifice of the vessels, cause a whizzing or blowing sound, as the blood

passes through them from the Heart. Or, they (the valves) may be so contracted, or otherwise altered in structure, as to be incapable of closing the respective orifices; whence a second murmur is produced by a portion of the blood regurgitating, or returning to the Heart.

The murmur then may be either single or double; it may accompany either one or both sounds of the Heart. The murmur with the *first* sound, may proceed either from *contraction of the aortic valves, or regurgitation through the mitral.* The murmur with the *second* sound, almost always, proceeds from *aortic regurgitation.* Similar sounds may of course proceed from similar conditions in the valves of the right side; but as already stated, inflamation of the right side is rare from any cause, and especially in connexion with Rheumatism; and even if they are affected, a careful attention to the Diagnosis, as already stated, and more particularly pointed out by Hope and others, will prevent error.

When the *aortic* valves *obstruct* the circulation, a murmur is heard, with the *first* sound of the Heart, on the sternum, opposite to the lower margin of the third rib, and thence about two inches or more upward along the course of the ascending aorta, to the right.

When the *aortic* valves admit *regurgitation,* a murmur is also heard, but it accompanies the *second* sound. When both *obstruction and regurgi-*

tative lesions of the *aortic* orifice exist, we have a double, or *to-and-fro*, sawing murmur.

Contraction caused by disease of the *mitral* valve, produces little or no murmur, unless the contraction is considerable, and then the murmur accompanies the *second* sound of the Heart. When the valve admits free regurgitation, the murmur accompanies the first sound. These latter—*mitral*-murmurs, are heard most distinctly near the apex of the Heart, and a little to the sternal side of the nipple. These Physical signs of Endocarditis may accompany or even precede the attrition sounds of Pericarditis, they however continue some time after the signs of Pericarditis have disappeared.

The occurrence, then, of these signs (valvular) in connection with Rheumatic inflamation, is *certain* evidence of valvular disease, and strong presumptive evidence of Pericardial inflamation, even though the friction sound is prevented by effusion or adhesion.

Either of these murmurs may, or may not, be accompanied with a vibratory thrill, a " purring tremor." It is, however, more common in *regurgitation* through the *mitral* valve. It is just the same gentle vibration as that which is felt on placing the hand on a cat's back, when she is purring. It has accordingly been called a " purring thrill,"—(" *fremissement cataire.*")

The great majority of cases if properly treated, terminate in recovery. In other cases the valvu-

lar disease becomes, sooner or later, complicated with morbid alterations in the cavities of the Heart, in respect to size and strength, and thus cause those alarming lesions, which often terminate life without a moment's warning. If uncured, "the immediate effects of Endocarditis are to narrow the orifices at which the valves are placed, to impair the action of those valves by means of adhesions or by destroying their elasticity, and to substitute, for the naturally smooth surface over which the blood flows, a rough membrane, which, on the valves themselves, is often beset with vegetations. These different alterations have one common effect, which is *obstacle* to the course of the blood; and the necessary consequence of that obstacle is, distension of those cavities which are situated behind it in the course of the circulation. The heart labours in the discharge of its functions, and, by the operation of a general physiological law, its nutrition is promoted, and hypertrophy the consequence. The dilitation and hypertrophy increase, because the original obstacle remains, or perhaps increases, and because dilatation itself is a further cause of obstacle; for the force required to empty a cavity through a given orifice is greater as the capacity of the cavity increases. At length the deviation from the natural structure of the heart becomes very great, and its functions suffer in proportion: all the distressing symptoms of advanced disease of the heart supervene, and sooner

or later terminate in fatal dropsy. These deplorable effects follow with greater certainty and in shorter time, in proportion as the obstacle is greater which is offered to the course of the blood by the original morbid alteration of the lining membrane. It would be interesting therefore, as regards prognosis, if we could appreciate at an early period the degree of this obstacle." It should be considered a most formidable and serious disease.

The Treatment, recommended by Hope, is that usually adopted by the best Physicians of this country. It is briefly, thorough sanguine depletion, general, and local, or local alone, as the case may require,—the free and repeated use of calomel combined with opium. In addition to these remedies, cathartics and repeated blisters are to be used if required.

There is also a species of palpitation spoken of *(Bouillaud, Joy,)* and described as a Rheumatic affection of the Cardiac nerves, and accompanying this there is pain and occasionally an intermittant pulse. These symptoms should not be confounded with those arising from Rheumatic Carditis.

M. Chomel states, (1) that he has seen Pleuritis as often as Pericarditis in Acute Rheumatism. This is not the experience of others ; yet there can be no doubt that it frequently occurs.

(1) Leçons Cliniques Sur le Rheumatisme et Sur la Goutte.

Metastasis, to the Meninges of the Brain, is attended with a sense of weight and sometimes, acute pain in the head and intolerance of light and sound ; a wild and anxious expression of countenance, occasional delirium, Strabismus and impaired vision. (1) These symptoms are now supposed by many to depend more or less on cardiac inflamation. It is certain that in every instance in which symptoms of Arachnitis come on, there was also affection of the Heart. And on examination of the fatal cases,—and these cases are generally fatal,—there was often not the slightest evidence of inflamation in the membranes of the brain. It would be interesting and useful, to establish in what proportion of cases, attended with symptoms of disease of the Brain, there is really disease of this organ.

Metastasis to the *Lungs* occasions the symptoms of ordinary Peripneumony. (*Eberle.*)

Metastasis to the *Stomach*, is indicated by pain, nausea, vomiting and indigestion.

In *Metastasis* to the *Intestines* "the pain is often excessively severe and shifts from place to place, that is, from one part of the muscular coat to another." *(Dungleson.)* I have met with several cases in which the pain was inconsiderable except when the bowels were evacuated, then, the pain was excessively severe. The suffering

[1] "Observations on A. R. and its metastatis to the heart, by Thomas Cox, M. D., London, 1824.

was evidently caused by the muscular movement of the bowels, precisely as in an inflamed joint.

Metastasis to the *Bladder* is indicated by pain behind the Pubis and in most cases retention of Urine. Rheumatism of the Bladder and Stomach seems to have been noticed as far back as 1694. Lister tells us "Sæpe denique, prioris articuli, dolore declinante, *secundus* invaditur, atque eodem similiter miscente, *tertius* sumit exordium, consentiente etiam vesica, atque Spinæ majoribus nervis, quos *Tenonias* vocant. Et in Stomacho etiam nausea vel vomitu jactantur ægrotantes." (2) The *Uterus* may also be attacked. Inflamation of the Womb of a Rheumatic character is probably far more common than is generally supposed. *Dysmenorrhœa* has been considered as a periodical Rheumatism. *(Dewess.)* Not only this, but other abnormal conditions of the Uterus, I believe, to partake of the usual characteristics of Rheumatic inflamation. Females do not generally complain to a Physician of disorder in the organs of generation unless it be severe, but keep their indisposition secret until it may have degenerated into organic disease. I have known many who have suffered much from pain, and especially at their menstrual periods, who have been immediately and permanently relieved by the treatment hereafter directed. If Physicians would make frequent inquiry when the symptoms lead to suspicion, they

[2] Martini Lister de morbis chronicus. London. 1694. Page 224.

would find a very curable species of painful menstruation exceedingly common, especially though not exclusively among those who are subject to Rheumatism. But whether dependent upon irritation of the Spinal nerves or not, there is strong ground for the opinion that, both Dysmenorrhœa and other Uterine disorders are often intimately connected with the Rheumatic diathesis, *(Todd*, (1) *Chailly*. (2) I have repeatedly seen threatened miscarriage clearly depending upon Rheumatic *irritation*. The pains are more or less regular and closely resemble actual labor pains, yet an examination of the Os Uteri does not detect contraction. These pains yield *at once* to counter irritation on the spine; they also yield, but after a longer or shorter interval to morphine.

The above remarks in regard to the symptoms of attack by metastasis, apply equally to original attacks in the same organs.

TERMINATION.

The termination of acute Rheumatism is generally by resolution; yet if badly treated it is apt to result in the chronic form. "Chronic inflamation of the Dura Mater sometimes takes place; sometimes chronic inflamation about the Joints, which in some instances assumes the character of strumous inflamation, or what is called "White Swelling." *(Armstrong.)*

(1) Practical remarks on Rheumatic Gout,—Chronic Rheumatism of the Joints, &c. by Robt. Bently Todd. London, 1843.
[2] Chailly's Midwifery. New York, 1841. p. 103 & 193.

Acute articular Rheumatism as already stated may terminate in Heart disease.

Rarely it terminates by suppuration. Bichat believed that Rheumatic inflamation never ended in the formation of abscess, though coagulable lymph might sometimes be effused round the tendons affected. Yet other cases have been seen ending in pure abscess by observers abundantly capable of discriminating between the effusion of lymph and the formation of pus. *(Morgagni, Good, Darwin, Bouillaud, Piorry, Stoll.)* It is contended however, that where pure pus is found, it results rather from *Phlebitis* than Rheumatic inflamation of the other Tissues. *(Chomel, Budd, &c.)* Though this is a question of Phisiological interest, it can scarcely admit of further consideration at present.

Gangrene is mentioned as a result. *(Bouillaud.)*

It may terminate in *Palsy*.

Contraction of the *Tendons*, *Chronic Enlargement* of the Bursæ not unfrequently result from acute attacks.

PROGNOSIS.

Rheumatism is rarely fatal while external; it only becomes alarming and dangerous when fixed upon some important and vital part, yet there is always doubt when an erratic disposition is manifested; for, although it may not as yet have seized upon any important organ, there is

a possibility of its doing so at any moment. It is necessary, therefore, to watch with care, the condition of the Heart, Brain, &c. whenever an erratic tendency is manifest. There is truth in the remark that "in ordinary cases our Prognosis relates rather to the *duration* of the disorder" *(Scudamore)* than its result.

There are but few complaints presenting more difficulty on this point than Rheumatism; its duration is exceedingly uncertain. It may be checked at once, or it may continue for weeks. Dr. Armstrong says, "If it have gone on four or five days without interruption, you may diminish its violence, but you cannot remove it in a few hours as you can inflamation of a serous membrane."

Dr. Hope thinks it should be cured in from 8 to 10 days. Bouillaud allows from one to two weeks. M. M. Gendrin and Martin Solon allow eight days from the commencement of treatment.

Dungleson says, often a fortnight, but more frequently from four to six weeks, is its average duration.

So far as my own experience goes, the disease has not proved thus intractable unless accompanied by complications. The great majority of cases as before stated are dependent on irritation of the Spinal Nerves; where this is the case, *relief* from the use of proper remedies is immediate, and if the attack be at all recent the *cure* is

immediate; so that it often seems like a *metastasis out of the system.* Under these circumstances, I expect the disease in a good constitution and healthy secretions, to yield *immediately.* Such is also the experience of others. *(Thomas, Mitchell, Teale, &c.)*

If the digestive organs are disordered, it is idle to look for an entire cure until these are corrected. The time in which this may be accomplished, will vary, of course, according to the circumstances of the case, and the constitution and habits of the patient. The favorable circumstances are thus concisely stated. "Early relief from active treatment; the inflamation keeping its place in the parts first attacked; absence of delirium and intense constitutional irritation; perspiration general and moderate, and giving relief instead of being partial, profuse, offensively acid and seeming merely to occasion exhaustion; pulse keeping within one hundred in the minute; tongue not very foul; stomach not affected with very urgent sickness, nor the bowels with painful irritation; urine depositing a lateritious sediment, and alvine evacuations becoming more natural." (1) Yet we should never be too positive in our prognosis of Rheumatism, notwithstanding these favorable signs, for there is no security that they will continue; slight exposure or error in diet may cause the return of the dis-

[1] Treatise on nature and cure of Rheumatism, by Dr. Scudamore, page 65 & 66.

ease; and indeed it does happen that while every thing bids fair for recovery, the whole train of distressing symptoms, return without any appreciable cause.

In Rheumatic Carditis there is always danger unless met by early and active treatment.

DIAGNOSIS.

The only disease with which we would be liable to confound acute *articular* Rheumatism is *Gout*, and even from this the diagnosis is in most instances sufficiently clear; yet there are cases in which it is difficult to decide: so difficult that many solve the difficulty by calling it Rheumatic Gout. Rheumatism and Gout were by the older writers described under the common name of *Arthritis*, and some even among modern Pathologists *(Chomel, &c.)* contend that these are essentially identical. The general opinion, however, now is, that they are radically distinct.. The first account of Rheumatism as distinct from Gout, is by Bellonius, in 1642. (1) The more prominent points of difference between Rheumatism and Gout are thus stated by different observers.

For the sake of convenience they may be arranged each under their respective heads—

RHEUMATISM.	GOUT.
Frequently attacks the young, and often before puberty.	Mostly attacks persons more advanced in life.

[1] De Rheumatismo et Pleuritide dorsali. Paris, 1642.

RHEUMATISM.	GOUT.
Occurs in the robust and active.	Is more confined to the dyspeptic, indolent and dissipated, and especially to those who use fermented drinks.
Is frequently caused by damp or changeable weather.	Is not often influenced by weather.
Rarely preceded by dyspeptic symptoms though it may be accompanied by costiveness.	Is preceded and attended by disorder of the Liver or some part of the mucus membrane of the alimentary canal.
Almost invariably siezes the larger Joints in the first attack.	Generally seizes the joint of the great toe, or some of the smaller joints in the first attack.
Urine is remarkable for the quantity of uric acid.	Urine deposits lithic acid, or lithates.
When the disease subsides the parts do not desquamate.	When the disease subsides the parts do usually desquamate.
There is tolerance of loss of blood. (*Hall.*)	There is less tolerance. (*Hall* says intolerance.)
	Fever is less ardent.
	Greater tendency to metastasis.
	Part swells more rapidly.

RHEUMATISM.	GOUT.
Not so much swelling or redness of skin.	The skin is shining.
Is attended with profuse perspirations and generally acid.	
	The first attack is generally at night. The first attack is much shorter frequently only 24 hours.

It has been said that Rheumatism of the anterior parietes of the abdomen may sometimes resemble peritoneal inflamation; concerning this, Baudelocque remarks: "This Rheumatism is very rare, particularly during the puerperal period; neither fever nor vomiting accompanies it. Uncertainty can exist only at the commencement, for after a very short time the different march of the two affections will easily cause them to be distinguished." (1) The only instance in which I have met with this condition, it was dependant on Spinal Irritation, and yielded to hot poultices of hops and vinegar to the spine.

Elliotson describes a Rhemuatic Neuralgia. He says, "there is a decided rheumatic neuralgia. The exquisite neuralgia, described as tic douloureaux, may arise from those vicissitudes of temperature that occasion rheumatism, and may be rheumatic. But pain, not of that description, though perhaps very acute, perhaps dull and

(1) Treatise on Puerperal Peritonitis, by A. C. Baudelocque, M. D. &c. &c. p. 231.

aching (as is usual in rheumatism,) is every day witnessed in the situation of nerves, in persons who have rheumatism in those situations, and who have been exposed to cold, or perhaps cold and wet; and it yields as readily to the treatment of rheumatism, as the ordinary rheumatism of other parts. The neurilema, which is a fibrous membrane, is probably still more affected than the nerve; since rheumatism is chiefly a disease of the fibrous membranes.

In rheumatic neuralgia we observe all the varieties of suffering occasioned in other parts by rheumatism: sometimes acute pain, with tenderness, heat and even throbbing, and aggravation of pain by heat; sometimes dull aching only; sometimes pain on motion, pressure, or other modes of mechanical irritation; sometimes remittent, intermittent, or even periodical, pain. The pain is sometimes exquisite and sudden, assuming the character of tic douloureaux; which, we may remark, not only when rheumatic, but sometimes when not apparently so, may assume a periodical type. It is the clear situation of the pain in a nerve, and not the character of a pain, when it is not like the pain called "tic douloureaux," that justifies us in rheumatism to pronounce it neuralgic.

The nerves chiefly attacked by rheumatism, are the sciatic and the branches of the fifth. It is very frequently inflamatory; so that the surface is tender, hot, swollen, and even red. Some-

times no marks of inflamation are discoverable, and warmth and other stimuli relieve. In the case of the face especially, (one side only of which is usually affected, and perhaps not only the nerves, but some of the surrounding parts,) there is a great tendency to periodical intermission, and the paroxysms usually occur in the evening." (1)

I am satisfied that this is an exceedingly frequent form of Rheumatism; generally not very severe, but occasionally very sudden in its occurrence, and causing most intense distress during its continuance. In the cases I have seen of this description, pain was the prominent symptom. (See cases 7 and 8.)

Opthalmia.—The frequency of this disease renders it proper that we should say a word on the diagnosis between the common and the rheumatic forms. The points of difference are thus concisely stated by Dr. Taylor: (2) "Besides the diversity of their seats, inflamation of the sclerotic coat is easily distinguished from the corresponding affection of the conjunctiva by the following diagnostic marks: The redness in inflamation of the sclerotica is deep-seated, and forms a radiated zone around, and upon the margin of the cornea; in that of the conjunctiva it is superficial and reticulated, and frequently accompanied with sub-conjunctival patches of ecchymosis. The secretion

[1] The Principles and Practice of Medicine, by John Elliotson, M. D. &c. &c. Phil. 1844. p. 655.
[2] Lib. of Prac. of Med. Vol. II. p. 152.

from the eye in the former *(sclerotitis)* is lachrymal, in the latter it is mucous. The pain attendant upon sclerotica is generally severe, deep-seated, and frequently pulsative ; it is especially felt over the orbit, and is aggravated from sunset to sunrise. In inflamation of the conjunctiva, the pain is comparatively slight ; it is felt upon the surface of the conjunctiva, imparting a sensation as of sand beneath the eyelid ; it seldom extends to the head, and is felt most in the morning when the eyes begin to be moved. In inflamation of the sclerotica there is always intolerance of light, varying in degree according to the severity of the other symptoms ; in that of the conjunctiva, though slightly observed in the early stage of the disease, it disappears as the other symptoms become developed. The cornea, moreover, is dull and hazy in the former ; in the latter it preserves its natural appearance. If the inflamation has advanced to the iris, symptoms of iritis will be superadded to those already mentioned."

It is further stated by some that there exists absolutely no photophobia in simple catarrhal opthalmia, uncombined with sclerotitis, and the tears, the passage of which is only mechanically obstructed, are not increased in quantity or acrimony. Photophobia and lachrymation then, are almost pathognomonic of rheumatismal opthalmia.

It should be borne in mind, however, that a catarrhal affection of the conjunctiva may be combined with the rheumatic inflamation of the scle-

rotica. *(Catarrho—Rheumatic-opthalmia.)* The symptoms then, present a mingled assemblage of those peculiar to each, although one or the other generally predominates.

The treatment for the former *(Sclerotitis)* does not differ from that hereafter recommended for other forms of Rheumatism. For the latter *(Catarrho-Rheumatic)* in addition to the general treatment, Dr. Mackenzie advises (1) local depletion, and the nitrate of silver solution—four grains to one ounce of water. If the disease manifests a tendency to become chronic, a blister should be applied to the nape of the neck.

Rheumatic Iritis is fully described by Mackenzie, (p. 505 et seq.) but there are not sufficient points of difference between this and Idiopathic Iritis, to modify materially the treatment proper for the latter disease. If we understand the symptoms, progress and effect of the one we are prepared for the other.

Rheumatic *Diaphragmitis*, is mentioned by Patterson (2) and Portal (3) and should be carefully distinguished from inflamation of the adjoining structures. The symptoms are the same as in idiopathic inflamation of the diaphragm.

[1] Treatise on diseases of the eye.
(2) Mem. of Med. Society of London, Vol. v. No. 32.
(3) Anat. Med. t. ii. p. 444.

TREATMENT.

A great error, and I may say *the* great error, of early systems of practice, has been to seek for specifics to cure disease, instead of correctly understanding the real pathological condition. Closet concocted theory generally directs very different treatment from bed side observation. It is for this reason that distinguished theorists are frequently unsuccessful practitioners. This remark holds true of almost every disease, and to a very considerable extent of Rheumatism. Numerous systems of treatment have been proposed, and though something good and useful might be gleaned from each, the great majority rapidly fall into disrepute. A result that must always happen when specifics are sought. But increased attention to physiology, and more especially pathology, has greatly improved the treatment of disease; more regard is now had, by all scientific physicians, to the *actual condition*, than to mere *names*. *Facts*, instead of *theories*, have accumulated and many distinguished physicians have of late years devoted their time to the collection of facts independent of theory. The treatment of Rheumatism is therefore much more successful now than formerly.

Almost every writer of practical knowledge, admits that acute Rheumatism is strictly inflamatory, and unless modified by some peculiar circumstances,—an epidemical condition of the air,

or occurring in a broken and debilitated constitution, requires active depletion. And first on the list stands

Bleeding.

This being the most sure and speedy depletive we possess, demands our first attention. On this subject Dr. Dewees judiciously observes that "Bleeding to be successful in Rheumatism must necessarily be governed by the same general principles as regulates its employment in other cases. And to render it efficient, or to prevent from becoming hurtful, the name of the disease must in part be lost sight of, though its habits are to be kept in view, and its employment always determined by the state of the system—that is, by the force of arterial action; the degree of relief; the intensity of the pain; the state of the skin, &c." (1)

It would be a false position, to maintain that, general blood letting should be practised in every case of acute Rheumatism. The severity of the disease, the state of the atmosphere, the constitution and habits of the patient, the stage of the complaint, &c. are all circumstances to be considered in deciding whether we shall bleed, and the quantity of blood to be taken.

An atmosphere filled with miasm, a broken down and debilitated constitution, a protracted attack, &c. are circumstances, that should induce

[1] Practice of medicine. p. 752.

caution in the use of active depletion ; but these considerations are of course understood by every Physician, and belong rather to general practice than to an essay on a single disease.

If the patient then be robust, and there is nothing in his general condition to forbid blood-letting, he should be bled decisively, that is, without regard to quantity, but until some decided impression is made upon the state of the system ; this will almost invariably be evinced, by a reduced force and frequency of the heart's action ; *The Pulse should feel it.* If this course be pursued early in the disease, it will generally be cut short at once. If the attack have been established for some days, the bleeding will give sensible relief, but other measures will be required to perfect the cure.

If the patient be of a delicate constitution, blood letting by leeches will be sufficient, but, carried to the same extent, that is, till a sensible effect is produced on the action of the heart.—Such is the practice in regard to blood letting, recommended by the most successful Practitioners. Blood letting has, however, been recommended to a much greater extent. M. Boulland proposes—(supposing the patient to be well constituted and in the vigor of life)—at the first visit a bleeding of four cups; (1) on the second day a double bleeding of three cups and one and a half cups ; between these, three, four or five cups, by leech-

[1] *Palette*—Bowl, saucer, cup,—holds four ounces.

es or cupping glasses, applied to the affected joints; or, if the heart is implicated, to the precordial region. On the third day the patient is again bled and the local bleeding as before; on the fourth day, if the inflamation has not yielded, another bleeding of three or four cups is practised. On the fifth day the inflamation generally yields, if not, general or local bleeding to the amount of three cups is used. On the sixth, seventh and eighth days convalescence is manifest, and nourishment is allowed. The medium quantity of blood recommended by Bouillaud to be taken in robust subjects, with intense articular inflamation, is four to five pounds, yet it may be necessary to take as much as seven or eight, while in light cases it need not exceed two or three pounds. (1) Dr. Dungleson speaking of this course says that with him "the result has not been equally fortunate," and it seemed to him "that the too vigorous use of the lancet rather favored the shifting of seat," and again, "it is only admissible in vigorous individuals; and even in them the more sparing use of the lancet, with the adjuvants to be mentioned hereafter, appears to be less liable to objections." (2) In regard to the supposition that this extensive blood letting favors the metastasis of the disease, there can be no doubt but that, in many cases, it is correct. For experience fully establishes the fact, that translation of the local affection to an internal organ, is particularly fa-

[1] New Researches on Acute Articular Rheumatism, p. 57-8.
[2] Practice of Medicine, vol. ii. p. 650.

vored by greatly reducing the system and impairing the vital energies; yet Dr. Seymour, of St. George's hospital, and whose experience is considerable, contends that bleeding does not produce this effect, and consequently is never productive of metastasis. His observation probably extends to less extensive bleeding than that recommended by Bouillaud. Eberle considered blood letting "incapable of itself of subduing the local affection, however copiously practised." *(Practice of Med.)* Johnson says that "detracting large quantities of blood in cases of acute Rheumatism is productive of more frequent metastasis from the extremities to internal organs than a more moderate treatment." (1) Dr. Kempsher (2) and Dr. Armstrong (3) mention instances of this kind. On the other hand, numerous instances are recorded to show the contrary. In forty-two cases, in one half of which Rheumatism of the heart came on, blood letting had not been practised. (4) We should also remember the fact already stated *(page 26)* that disease of the heart frequently *attends* Rheumatic inflamation of the joints, and may only develope itself by rational signs when the joint disease has yielded to a bleeding which however was insufficient of itself to cure the affection of the heart.

[1] Medico Chirurgical Review, June, 1823, p. 215.
[2] Philadelphia Jour. of Med. & Phys.; Sciences No. 12.
[3] London Med. & Phys. Journal. No. 289.
[4] Library of Practical Medicine, vol. iii. p. 566.

It is undoubtedly true that copious evacuations of blood, unaccompanied by other treatment, especially in an individual who has before suffered from the disease, or any of whose internal organs are weaker than natural, might induce sudden strong reaction which would be productive of metastasis to the weaker organs. This evil may happen, but it is not probable that it often happens, and can scarcely be a necessary consequence in any case; a careful and sufficient examination into the general health and constitution of the patient would prevent carrying the loss of blood to such an extent, as to cause a weakening of the vital powers.

And further, if this view of the case be correct, that it is the reaction that produces the metastasis to a weaker organ, it might probably be prevented, by guarding against the sudden reaction occasionally seen, not only in this but in many other diseases requiring free bleeding. We possess such a remedy in opium. If free bleeding be practiced, and metastasis to an internal organ is to be feared, I believe a full dose of opium will prevent it; neither do I know of any sufficient objection to its use. That opium may be safely administered after depletion in this disease will be evident when we come to examine this part of the treatment.

It has also been objected to extensive bleeding *(Scudamore)* that it induces a chronic form of the disease. To which it is very justly replied, "that

the chronic form was not *induced* by the bleedings, but the bleedings were only *capable* of reducing the inflamation to the sub-acute, or chronic form. If this be so, it only proves the inadequacy of the remedy, and not its hurtful quality." *(Dewees' Practice of Med.)*

Although it may not be true that decisive yet judicious bleeding creates a tendency to metastasis, or induces the chronic form of the disease, it will not be denied that the remedy is sometimes unavailing, and fails to procure relief. These rare cases are exceptions to the rule and afford no objection to the proper use of the lancet. They should rather teach us to be more careful in our investigations of each particular case, and discriminate more wisely the circumstances that contra-indicate this potent remedy. There should be the true inflamatory condition, for, as has been justly observed, bleeding "disappoints our expectations of relieving the pain of the disease unless as the pain and local inflamation may be connected with the true inflamatory diathesis." (1) For this reason it is wisely enjoined by almost every writer, not to push bleeding to the same extent in Rheumatism, when it fails to relieve, as in many other inflamatory diseases. We should be guided rather by the general condition of the patient—the symptoms taken *en masse*—than by the severity of the pain, or the bu y coat on the blood. In other inflammatory diseases the buffy coat on

(1) Scudamore. p. 69.

the blood is generally a safe indication for further depletion; but in Rheumatism it forms no sufficient rule, for the buffy coat will sometimes continue in spite of the most copious evacuations. Andral says, "If the Rheumatism does not give way to blood-letting the buffy coat continues and even becomes more evident, as we persevere in repeating the venesections." (1) A surer practical indication is taken from the form of the coagulum and its firmness. "When it is exceedingly cupped, when the inferior part beneath the stratum of fibrine is very firm, it is a presumptive evidence that the heart and arteries are laboring under that morbid contractility which distinguishes the inflamatory diathesis." *(Scudamore.)* Andral also mentions the fact, though not in this immediate connexion, that where bleeding is ineffectual, the buffy coat continues, "yet the serum increases while the coagulum decreases." This observation would add weight to the rule proposed by Scudamore. We may conclude then, that where the disease continues unabated, and the blood is cupped and abounds in fibrine rather than serum, we may repeat the bleeding with safety. Neither must we forget that the pulse in Rheumatism, as in other diseases, is sometimes deceptive, both as to its activity and volume, and bleeding may be immediately necessary, where the pulse gives no such indication. An *apparent* weak and feeble pulse is not a constant indication of a feeble circulation; it is of importance therefore to discrim-

(1) Pathological Anatomy, vol. i. p. 667.

inate between a pulse that is *really* weak and one that is only *apparently* so. The remarks of Laennec on pneumonia apply occasionally, though not equally, to the present subject. "In every case whatsoever, the more feeble the pulse is, the less indication is there for venesection. At the same time it is well known to every practitioner that this feebleness is sometimes only apparent, and that bleeding will render the pulse both stronger and fuller. To discriminate the false from the real feebleness of pulse, requires the tact of an experienced practitioner; and unfortunately the most expert are in this often deceived. (1) In cases of this kind the use of the stethescope will tend greatly to remove our doubts." "Whenever the pulsations of the heart are (proportionably) much stronger than those of the arteries, we may bleed without fear, and with the certainty of finding the pulse rise; but if the heart and pulse are both weak, the detraction of the blood will almost always occasion complete prostration of strength.(2)

If we attend carefully to the above considerations, there can scarcely be danger of bleeding either unnecessarily or too extensively.

It is not to be denied, however, that some physicians (3) oppose the use of the lancet in the

[1] It may be true that experienced practitioners are deceived oftentimes in regard to this pulse, but it results oftener from carelessness than want of skill.

[2] Diseases of the Chest. p. 243.

[3] I do not mean by this, either Thompsonian, Homœpathic or any other pretenders to exclusive medical science. But I may remark in this connection that I have seen Thompsonian, Homœpathic, and various other systems of modern Humbuggery, faithfully tried and signally fail; and yet the same cases, notwithstanding the tampering of steam and the foolery of infinitesimal doses, yield immediately to free depletion and other appropriate remedies.

treatment of acute Rheumatism, and they argue mostly from the want of success that often attends it. From first condemning the indiscriminate employment of blood letting, they have eventually condemned it in toto, and recommended a course directly opposite. Such are the views of Willan, Haygarth and others; but it is more than probable that these opinions were formed from cases in which blood letting had been unnecessary or injudicously employed.

Dr. Seymour says he has "never omitted bleeding in the outset of the disease without having great occasion to repent of it afterwards." (1)

We may safely conclude that in simple acute Rheumatism, occurring in a robust constitution, blood letting cannot be judiciously omitted, and further that it should be the *first* remedy employed and that it should be used *decisively* and *boldly*.

After the removal of the more acute symptoms by general bleeding, leeches or cups may be occasionally used with benefit *near* the affected joints, but if employed before general bleeding, they will rarely fail to aggravate the disease; unless, perhaps, as practised by Dr. Elliotson, freely and largely, to take the place of general bleeding. This practice does not appear to posses any advantage over the lancet, and it is liable to several objections.

As already stated, general bleeding may not be indicated, or, it may have been practised and

(1) London Lancet. 1843. p. 259

proved inefficient, having removed the disease only in part; under such circumstances other remedies become necessary. We have then one of two conditions. Either, the inflamation is at once cut short,—nipped in the bud,—or, it continues in a modified form. If the condition was in the beginning a simple inflamatory diathesis, it is cut short; but if the inflamation instead of being simple is complicated with disorder of the Stomach, Liver or Bowels, the second condition ensues, and the case now corresponds very nearly with that occuring in more delicate constitutions, where bleeding might be unadvisable, and this leads us to the consideration of other remedies.

Purgatives.

There is considerable difference of opinion as to the extent to which this remedy should be carried, some placing considerable reliance on free purgation, others desire only an aperient effect.

Much depletion, from the bowels, by purgatives, can scarely be admissible in a severe case of acute Rheumatism. The extreme helplessness of the patient would render such a course very inconvenient and painful. Yet, where the disease has been partially subdued, their agency becomes almost indispensable. For this purpose, nothing is better than calomel, aided by magnesia and colchicum. Dr. Armstrong recommends calomel (10 grains) and rhubarb in the morning, and, if

necessary for its operation, followed by senna and sulph. magnesia,—and in the evening, tinct. or wine of colchicum in doses of from half a drachm to a drachm, according to the debility of the patient, say one drachm to a robust man, and half a drachm to a delicate one. I prefer giving the calomel alone, at night, and the colchicum and magnesia (a drachm of each) in the morning, and if the bowels are not sufficiently moved in six hours, then to repeat the colchicum and magnesia, and, if necessary, again in four hours more, and thus to continue until evening, when, if necessary, repeat the calomel—or, in other cases after the calomel, the colchicum alone may be sufficient without the magnesia. The amount of calomel given at a dose should depend somewhat upon the constitution of the patient, and the nature of the disease; if the constitution is strong and the attack still inflamatory, (and there be no idiosyncracy of the patient forbidding its use,) the pulse somewhat firm, the skin hot and dry, and the pain severe, I would give from 40 to 50 grains; in other cases 5 to 10 grains would be sufficient. This may appear like giving calomel with a liberal hand. But I know from experience that with the precautions mentioned, it is not only *safe* in these and even larger doses, but that it will operate with more certainty and mildness. I consider calomel, in large doses, to be, next to bleeding, the most powerful sedative in inflamatory diseases we possess. It does not act

as severely on the bowels as in smaller doses, and operates much more satisfactorily on the general system. I therefore believe that the benefit resulting from the use of this remedy is greatly increased by giving it in doses that are both cathartic and sedative. On some other occasion I hope to discuss the Therapeutic operation of this remedy more at length; for the present suffice it to say, that under the above mentioned conditions of the system, from 30 to 50 grains of calomel is perfectly safe, and its operation will be more satisfactory than a dose of 5 or 10 grains. If the excitement and pain is less severe from 15 to 30 grains will be sufficient. Calomel may thus be made to act as an alterative, as an aperient, or as a sedative; if we desire the latter effect, we must observe the same rule as in bleeding—use it boldly. (1)

In constitutions not admitting the use of mercury, the colchicum and magnesia, or the colchicum alone, will be sufficient, and repeated as the state of the bowels may demand. Dr. Scudamore recommends in addition to the colchicum and magnesia, tartar emetic in doses of from 1-8 of a gr. to 1 gr. The first dose usually sickens, but the stomach soon becomes accustomed to it. After the operation of these remedies an aperient is sometimes required; for this purpose the following is good: Epsom salts, 2 oz., tartar emetic, 1

[1] It should be borne in mind that calomel is often adulterated with corrosive sublimate. In administering it in large doses we should, therefore, carefully test its purity.

gr., water, 8 oz.—dose, a table spoonful every hour, or as needed. The comp. cathartic pill of the United States Dispensatory is also a valuable article, and may be used either as a purgative or aperient, or if the calomel in this pill be inadmissable, it may be omitted. The laxative pill recommended by Dr. Gallup is also good.

Rhei.	4 dr.
Gamboge,	2 dr.
Soap,	2 dr.
Mur. of amonia,	1 dr.
Aloes,	2 oz.
Antimonial wine,	q. s.

Dose, from 4 to 6 grains, repeated as necessary. Almost every practitioner has his favorite compound in these cases, and it is scarcely necessary to repeat them or increase the list. It will not be a difficult matter to select a proper aperient when required.

Antimony.

This has been much recommended in Rheumatism, and some place almost entire reliance on its use. It is employed in two ways, viz: either as an emetic or antiphlogistic. Horne values emetics above every other remedy in Rheumatism; he repeated them every other day until fifteen or twenty were taken. Others speak highly of emesis in the stage we are now considering, viz: after sufficient bleeding.

If there be functional disorder of the liver, or a general torpidity of the system, there can be no doubt of the efficacy of antimonial emetics. After the vomiting has ceased, Eberle recommends a full dose of calomel and opium. But if calomel is used in sufficient doses, as before directed, emetics will rarely be necessary—for if there is foulness of the stomach or torpor of the liver, the calomel will correct it.

As an *antiphlogistic*, antimony is highly extolled by M. Lallemand and others. It is given in one grain doses every hour, in small quantities of water; in this manner 12 or 15 grains will be taken in 24 hours without vomiting. There appears to be a tolerance of the remedy. It is said to be especially adapted to debilitated subjects, yet many use it in the more robust. Antimony has been used in this country, in the doses directed, not only in Rheumatism, but other inflamations, sufficient to prove its perfect safety.

Diuretics.

There can be no doubt but the secretion from the kidneys should be encouraged, and for this purpose very many articles have been recommended: but there is nothing better for this purpose than the calomel and colchicum already used as purgatives; and although it may not be proper to continue the calomel, unless perhaps in small doses, (say 1 to 2 grs.) the colchicum may

be continued as a diuretic, in doses of from 30 to 40 drops every four hours until the urine becomes abundant. Digitalis, nitre, and many other diuretics, are also used and by some preferred. Each remedy has some peculiar action and this should direct the selection.

Sudorifics.

If the Rheumatism be subdued by the previous treatment, but not entirely removed, sudorifics as well as diuretics are useful. For this purpose small doses of tartar emetic, in union with calomel and opium, as in the formula of Eberle, is a good prescription:

Tart. ant.	1 gr.
Calomel,	2 gr.
Pulv. opii.	3 gr.
Sach. alba,	12 gr.

Mix and make 8 equal parts, and take one every two hours; or the Dover's powder and calomel; or the neutral mixture:

Nitre,	1 1-2 dr.
Tart. emetic,	1 gr.
Calomel,	4 gr.

Make 8 equal parts—give one every two hours; if this purge it may be given less frequently. If the calomel disagrees it may be omitted.

Camphor,	8 gr.
Opium,	1 gr.
Ipecac.	2 gr. every four

hours, is a good diaphoretic. The use of warm

diluents promotes the diaphoretic effect of these remedies, and for this purpose the common boneset *(Eupatorium Perfoliatum)* is valuable.

Local Applications.

It is generally admitted that but little if any advantage is to be obtained from local treatment in the first stage of the disease; (we may perhaps except a remedy of Dr. Dewees, viz: warm sweet oil applied—not rubbed—and this operates probably by softening the tenseness of the skin.) After the disease is somewhat subdued, benefit may be had from leeches, blisters, or stimulating lotions. Elliotson recommends local bleeding and cold lotions as long as the temperature is higher than natural. (1) Cullen says, applications to the pained part are of little service in the beginning; fomentations in the beginning, rather aggravate than relieve the pains, rubefacients and camphor are more effectual. (2) Good says, nearly the same. Wool has been used. Oiled silk secured by bandages is highly spoken of. Chapman speaks favorably of blisters. (3) The tinct. of stramonium is good, so is the extract. Turnbull and Magendie recommend tinct. of aconite, (4 gr. to the oz. of alcohol.) Pereira and Curtiss advise the same remedy, (after using, if necessary, aperients, leeches, &c.,) to the amount of one to two drachms, rubbed in daily. Compresses mois-

[1] London Medical Gaz. 1833, p. 853.
[2] First Lines, vol. i., p. 178.
[3] Therapeutics, vol. ii., p. 103.

tened with solution of cyanide of potassium (10 gr. to 1 oz. of water,) is used. *(M. Malherbe.)* A liniment composed of pulverized camphor and hog's lard, in equal parts, rubbed in, is good. Dungleson recommends the lotion of Laycock, viz: tinct. of camphor and tinct. of colchicum, equal parts. Nitrate of silver in solution and tinct. of iodine are also used considerably of late, and with benefit. Aqua ammonia, either alone or with oil, is a common application. Dr. A. B. Granville of London, used what he called an antidynous lotion; (1) the lotion is applied with a compress, until the cuticle is raised, when it is said the pain is almost immediately removed, or very much relieved. When local irritation is desirable, I know of no agent that is better adapted to this end than Granville's; though the strong aqua ammonia is perhaps nearly if not quite as good. The lotion produces an antidynous effect not obtained by ordinary irritants; the same is true to some extent of the tinct. of iodine. Cold applications have usually been regarded as dangerous, from their tendency to drive the disease to internal and more important structures. Elliotson, however, *(Prac. of Med., p.* 1017,) recommends them in all cases, when the temperature of the skin is higher than natural. It would certainly be injudicious to apply cold to sound parts adjoining the inflamed, as is too often done, but where the lotion is confined to the inflamed skin I can see no risk in the practice.

[1] The particular directions for making this will be found in the London Lancet, Oct. 27, 1838, or in "Granville on Counter Irritations;" Carey and Hart, 1841. Also, Dungleson's New Remedies, &c., &c.

Under the head of local applications, we should perhaps mention *Hæmostasis*. This term is intended to express the act of arresting the blood in its course through the veins; it has been applied for the relief of several diseases, and incidentally, for the cure of acute articular Rheumatism. This remedy is proposed by Thos. H. Buckler, M. D., and its operation detailed at length. (1) It consists, briefly, in applying a bandage around one or more of the limbs, sufficiently tight to arrest the venous circulation; the veins below become swollen, and all the blood they contain is thus entirely cut off from the circulation as long as may be required, producing a corresponding depletory effect, and strongly resembling blood letting, with the advantage that the blood may at any moment be restored. Dr. Buckler mentions but one case of Rheumatism, and this was acute articular Rheumatism of the left elbow, "for which the patient had been twice bled, with little benefit. Hæmostasis was applied to the arm of the opposite side, and to the two lower extremities, with great relief of pain and mitigation of the general symptoms." In addition to this may be mentioned the older practice of Mr. Kellie, of "putting a tourniquet on the affected limb, so as to compress the artery, and then to take blood from a vein below the bandage."

[1] Maryland Med. and Surg. Jour. March 1843, p. 265, 309.

Opium.

We have spoken of opium as a diaphoretic ; it is also used as a narcotic and sedative.

The severity of pain in acute Rheumatism often leads to the employment of opium, and it becomes important to ascertain when, and in what manner, it may be taken. The *time* for its use is after venesection and purging. Dr. Dewees says " there should be a subdued pulse, a freedom from any particular determination to the head, a moist skin and tongue, open bowels, and a certainty that from idiosyncracy it does not disagree with the patient, before it can be exhibited with advantage." (1) The *manner* of its use is in full doses, every three or four hours, until relief from the pain is procured. If opium alone disagree with the patient, the denarcotized laudanum, or morphine may be substituted, or it may be combined with calomel, in small doses—ipecac., camphor, or tartarized antimony ; or, it may be given by enema in treble the ordinary dose. Dr. Findlay (2) speaks highly of its combination with antimony, (1 gr. of antimony and 2-3 gr. of opium every hour.) Eberle and others recommend a similar practice. Dr. Robert Christison, Prof. of Mat. Med. Edinburgh, after bleeding, and, if necessary, purging, gives immediately 10 gr. of Dover's powder, repeated frequently until 1 drachm is taken—perspiration being kept up by warm

[1] Practice of Medicine, p. 758.
[2] North American Med. and Surg. Jour. vol. x. p. 167.

drinks. (1) Opium thus employed is a powerful adjuvant in the treatment of acute Rheumatism ; but it is also used to a much greater extent, and by some, without previous treatment—the object is to produce, as soon as possible, a state of narcotism. "It is worthy of consideration" says Dr. Scudamore, "that so powerfully does pain modify the influence of opium on the nervous system, in every kind of disease, that it may be given in the boldest doses, without hazard or ill effect when pain is intense ; and in *no way except by the active repetition* can it be really efficacious when the occasions for it are urgent." Dr. Corrigan holds similar language : he urges that full and sufficient doses be administered. It is easy, he says, to fail from giving too little ; a grain in four or six hours is stimulant not sedative. The dose should be increased in quantity and frequency to relief, and kept at that until the disease is steadily declining. (2) Clarke gave 2 gr. every three hours for 24 hours. Rooney gave 8 gr. the first day and 12 the second and third. Dr. Aldrige gave in two weeks 200 grains. It is also mentioned that diarrhœa may occur during the use of the remedy from relaxation of the sphincter muscle. This is removed by starch injections. Dr. Cazenave gives a more minute account of this treatment. His method is as follows : (p. 167.) To an adult he orders a pill containing one grain of opium, and an hour afterwards another grain,

[1] Edinburgh Jour. of Med. Science. Feb. 1841. p. 91.
[2] Braithwait's Retrospect. Part 1st. 1842. p. 26-6.

if the pains continue. At the expiration of the second hour he gives a third grain. If after a little time there be a tendency to hilarity, he administers a fourth grain, and so on; a grain every hour until a complete calm is established, or an abundant perspiration is induced. This being the case he orders a grain to be given every two, three or four hours, according to circumstances, solely with the view of keeping up the perspiration. "Its failure is owing to the timidity with which it is administered. It acts in three ways, according to the dose employed. Given in small doses it obtunds the sensibility, and brings on temporary relief, but the cure is not thereby accelerated. Administered in a somewhat larger dose, it sometimes occasions nausea, palpitations, giddiness, headache, &c. These effects are, of course, but momentary, and should form no solid objection to the remedy, if it is found beneficial in other respects besides relieving pain. To the above effects of opium, if it be continued, succeed others; the patient does not sleep; but he experiences a kind of delightful ecstacy, forgets his sufferings, &c. The action is then excited like that of wine. In some cases an abundant perspiration is excited, but in both events, the radical cure of the Rheumatism is effected—that is, with or without the sweating process." During this mode of treatment the patient should be kept in an even and mild temperature, with flannel next to the skin, and on the simplest liquid food; use laxatives;

perfect quietude, &c. This course is no doubt safe, if judiciously practiced. Dr. Gallup, a bitter enemy to opium, as ordinarily used, admits that it may be useful as here prescribed, though not carried to the same extent. (1) Dr. Webb in a prize essay (2) speaks of its success in arresting either acute or chronic Rheumatism in a few days. Yet the practice is liable to objections, especially in a country practice ; for the patient cannot be visited as frequently as would be required to administer the medicine, and scarcely any patient has sufficient judgment to decide for himself when to stop. At best, it requires much discretion and judgment. Nothing short of narcotism effects the cure. A dose too little fails, and yet a dose or two too much might be dangerous. Dr. Dewees mentions several cases successfully treated in which this narcotic was administered through the skin. A blister was applied to the inflamed joints and the raw surfaces dressed with 1-4 to 1-3 of a grain of acetate of morphia. The disease yielded in from 4 to 8 days. This practice is also recommended by Dr. Gerhard. (3)

Opium is also used in combination with *calomel*. After venesection and cathartics, Eberle advises to "resort at once to calomel and opium, in the proportion of 3 gr. of the former to 1 of the latter every three or four hours, until the gums become slightly affected; after which continue with 1-2 gr.

(1) Institutes of Medicine, vol. ii., p. 227.
(2) Boston Med. and Surg. Journal. April, 1837.
(3) North American Med. and Surg. Jour. 1830. p. 150.

of the opium, at first every three hours, and gradually prolonging the intervals in proportion as the disease subsides." (1) Dr. Chambers of St. George's hospital, London, gives 10 gr. of calomel with 2 gr. of opium every night and morning, with a daily dose of black draught. He uses the medicine until the mouth is slightly affected, when the disease usually subsides. (2) Dr. Hope, a pupil of Dr. Chambers, strongly recommends a similar treatment; and also adds, thrice a day, a saline draught, with 20 drops of the wine of colchicum, and 5 gr. of Dover's powder. Under this treatment he expects the patient to be well in a week. This course was successfully pursued in 200 cases. (3) Mr. Gosse, of Geneva, carries the practice still farther, and uses calomel and opium to ptyalism. Dr. Pennock gives a notice of between two and three hundred cases, and recommends as the most successful treatment, beyond comparison, a modification of the treatment proposed by Dr. Hamilton and Dr. Chambers. He first premises bleeding if the subject is robust and plethoric. He then gives at night from 7 to 10 gr. of calomel, and from 1 1-2 to 2 gr. of opium; this is followed in the morning by an infusion of senna, comp. 1 1-2 oz., sulphate magnesia, 2 dr., and manna 1 dr. This should act upon the bowels three or four times. In addition to this he recommends the following draught three times a

[1] Practice of Medicine, vol. i., p. 399.
[2] Med. Chirurg. Rev. vol. v. p., 566.
[3] Med. Gazette. 1842. p. 581.

day : wine of colchicum, 15 to 20 drops, Dover's powder, 5 gr., saline mixt. 10 dr., syrup, 1 dr. The calomel and opium treatment, and especially the latter, will undoubtedly cure Rheumatism, yet I think the course first proposed, viz : bleeding, followed by full doses of calomel, colchicum and magnesia, preferable. It is less liable to salivate ; and this is no small consideration. Colchicum not only acts as a narcotic, but it acts with peculiar power in Rheumatic inflamation. Calomel, colchicum and magnesia, combined in different proportions, may be made to operate either as cathartic, aperient, diuretic, or narcotic, and, if a portion of Dover's powder be added, as diaphoretic. And further, although it is true as stated by Gregory and others, that calomel will seldom affect the salivary glands while the patient is laboring under acute Rheumatic inflamation, yet, this effect is seen immediately as the disease yields, requiring the closest care to notice the first symptoms of ptyalism ; or, we may unwittingly make the mouth worse than the joints. So far as I can judge, salivation is much less likely to take place when calomel is combined with colchicum, than when it is combined with opium. But in either case profuse salivation should never occur, and calomel should never be given for this purpose. The remarks of Macintosh, if directed against its inordinate use, are not too severe. But in this, as in every other disease, the abuse of calomel and opium, by the careless and ignorant,

should not prejudice the careful and well informed practitioner against their use. Any potent remedy, whatever be the nature of its operation, will often be abused by quacks and ignorant pretenders. Such being the case every judicious physician should study with more care, and define with more accuracy, the conditions indicating its use; and not abandon it on account of its misapplication by others.

Peruvian Bark.

This article like calomel, opium, bleeding, &c. has been extensively used and extensively abused. During convalescence it is often a proper and useful remedy; though if the case has been seen early and actively treated the bark will *rarely* be necessary. In protracted cases, and especially in weak and relaxed habits after depletion, or, when distinct remissions of the febrile symptoms occur, bark or quinine may be employed with advantage. It can scarcely be *necessary* under other circumstances. It has, however, been used early in the disease by several practitioners. (1) Dr. Haggarth recommended it as early as 1772. Dr. Davis (Professor of Midwifery in the University College, London,) says he has used it the greater part of his professional life, "and does not remember a case in which the disease was not happily subdued." (2) His practice was to give

[1] Sir Geo. Baker, Heberden, Duncan, Granger, Aiken, Willen, Saunders, Lettsom, Sir Lucas Pepys, Davis, &c.
[2] London Lancet. 1841. p. 722.

from a scruple to a half drachm of the bark three or four times a day, premising the free abstraction of blood and other important evacuations, as the case might require. I know of no very serious objection to the use of this tonic after a proper depletion by the lancet and other remedies as before mentioned, but I think that in ordinary cases, if antiphlogistic means have been properly employed, the disease will give way without the bark. It is an old, and should be an obsolete notion, that every disease requiring antiphlogistics to subdue it, also requires tonics during convalescence; the fact of a disease having been inflamatory in the beginning is no evidence that tonics are always necessary to restore the strength. In most cases the recuperative powers of nature alone are abundantly sufficient.

Other practitioners have gone still further in the praise of bark, *(Morton, Hulse, Smith, Fordyce, Fothergill, &c.)* and recommend it at once, without previous treatment, as the chief dependence to cure the disease. Dr. Fordyce says, that at the time of writing he had for fifteen years relinquished bleeding in favor of bark; and that during that time he had not lost above two or three patients out of several hundreds, for whom he had prescribed it; and had rarely met with an instance of metastasis: a very common occurrence when he was in the habit of employing copious bleeding. *(On Fever. Dissertation* iii.*)* Dr. Fordyce evidently neglected other remedies as adju-

vants of bleeding, and it is therefore not strange it should not have been successful. That he was successful with bark alone we cannot dispute; but such has not been the experience of others; and we can only reconcile the discrepancy by supposing the disease as seen by Dr. Fordyce was modified by some influence not noticed. It might have been atmospheric—epidemic—or the disease may have partaken, as it often does, of an intermittent character. Neglect on the part of an author, in treating of disease, to mention the modifying circumstances, often creates much obscurity and uncertainty. Fothergill advocated a similar use of bark, and Fothergill was allowed to be a judicious practitioner, (but if the statements of Dr. Withering and Dr. Armstrong be true, the opinion of Fothergill on any medical subject is utterly unworthy of confidence. He once wrote a book in a popular form on scarlet fever, and it is asserted that he afterwards became "convinced that his whole work was a tissue of errors; and yet never had the manliness to (publicly) acknowlege it." (1) If he could be guilty of such conduct in one instance he would in others.) In reference to this practice Dr. Cullen says, "I hold the bark to be absolutely improper and have found it to be manifestly hurtful, especially in its beginning, and its truly inflamatory state." (2) And again he says, "It appears to me fit in those cases only in which the phlogistic diathesis is alrea-

[1] Armstrong's Practice, vol. ii. p. 195.
[2] Materia Medica, part ii. chap. 2. p. 100.

dy much abated." (1) Bedingfield observes that it is generally injurious in the early stage of Rheumatism. Such is also the statement of Hosack,(2) and indeed almost every modern author who is not pledged to some favorite hobby, or over-influenced by some prevalent theory. Gregory says it should not be given "but with a natural state of the pulse and tongue," (3) and perhaps this is as good a rule as any.

Colchicum.

We have spoken of colchicum as an important adjuvant to calomel, opium, &c. after bleeding, and this might be considered sufficient; but the fact of its having been employed by several respectable physicians and relied upon alone, will excuse a brief additional notice. Its value in some febrile affections has been long known, and by many it has been extensively used. Colchicum was first prescribed for the cure of Rheumatism only in sub-acute and chronic cases; of late it has been also employed in the acute form. The famous *Eau Medicinale* of M. Husson is now supposed to be a saturated vinous tinct. of colchicum. It is contended by some that the benefit to be derived from colchicum is a specific effect, and by others, that the relief results only from the vomiting and purging. A concise description of this

[1] First Lines. vol. i. p. 179.
[2] Lectures on the Theory and Practice of Physic, p. 671.
[3] Elements of the Theory and Practice of Physic, p. 249.

mode of treatment is given by Mr. Wigan. (1) He does not bleed previously, neither does he object to moderate depletion if thought necessary; he has not bled, however, for Rheumatism during the last six years. He says, the more violent the attacks, the greater the number of articulations under its influence, and the more general the disturbance, the more speedy and the more perfect is the cure. If the bowels are loaded, he begins with an enema of the decoction of aloes, but this does not delay the use of the colchicum. The dose is 8 gr. of the powdered root every hour; this is to be continued until active vomiting, profuse purging,or abundant perspiration takes place; or, at least, till the stomach can bear no more. If slight nausea comes on after three or four doses, a delay of 1-4 of an hour may be allowed. A glass of soda water, a bit of lemon, or sugar, will often correct the nausea and enable the patient to bear more; the object being to get into the stomach the largest quantity it will receive. The operation is thus described: "At the end of the 6th or 7th dose a slight nausea comes on; by keeping quite still, turning away the thoughts by conversation, or listening to an amusing book, coaxing the palate with a slice of lemon, a clove or some such thing, three or four more doses can be received, when the disgust becomes perhaps unconquerable. After this there is generally sound sleep, with occasional nausea on waking. The pain ceases, but the more active effects of the col-

(1) Med. Gazette, June 30th, 1838.

chicum do not take place for some hours after the last dose." "The inflamation of the joints subsides, and they resume their natural size with miraculous rapidity." "As soon as a cup of souchong tea can be retained, a sound sleep comes on from which the patient awakes perfectly well." This is certainly a flattering account; but I have never seen it thus rapidly administered, and should be afraid to use it to the extent here recommended. Those most familiar with the operation of colchicum on the stomach and bowels recommend far more moderation than is here evinced, when its effects have become either nauseating or purgative.

Guaiacum.

This is, with some, a favorite remedy. Dr Seymour says, "I generally premise a good bleeding and afterwards administer the guaiacum mixture, and in a few days the patients are well." (1) Dr. Elliotson says, "where internal stimulents are necessary in Rheumatism, I think this is one of the best." Chapman speaks of it in similar terms. (2) His prescription is 1-2 oz. of the volatile tinct. on going to bed, aided by warm diluents. This generally produces copious sweats. Others have used it and with variable success. On the whole it is probably a good stimulant, &c. but it has no *specific* advantages over colchicum.

[1] Medical Times. 1841. p. 300.
[2] Therapeutics. vol. i. p. 356.

Nitrate of Potash.

This was proposed by Dr. Brocklesby, in 1764, as a *curative* remedy in acute Rheumatism. After a free bleeding he orders a copious allowance of warm gruel, in which from one or two drachms of the salt has been dissolved. The patient is to drink this freely at short intervals. He gives from 6 to 10 drachms of the *nitrate*, dissolved in from 3 to 6 quarts of gruel in 24 hours. Relief follows in from 2 to 3 days, and often a complete cure is effected within the week. Dr. Macbride, in 1772, recommended the same treatment. In 1832, it was considerably used by M. Gendrin and Martin Solon, at the Beaujon hospital. The quantity varied from 4 to 10 drachms in 24 hours, given in some demulcent drink. The duration of the disease when thus treated was about a week. The operation is diuretic, diaphoretic, and occasionally cathartic. Dr. Johnson also speaks highly of the remedy, and further recommends the addition of calomel at bed time. (1) I have used the nitrate of potash as here recommended, viz: after bleeding and with calomel, and was pleased with its effect, but I prefer the colchicum. Several other articles have been more or less extolled as possessing curative powers in acute Rheumatism.

Aconite is highly praised, and is even recommended as a specific. In the *United States Med-*

[1] Medico Chirurgical Review. 1841. p. 525.

ical and Surgical Journal, 1835, *p.* 177, are stated at length six cases in which the alcoholic extract was used with complete success, effecting a cure in from a day to a week. The dose was 1-2 gr. every 8 hours, increased to every 2 hours, and even from 2 to 9 grs. every 2 hours. This article is at present attracting considerable attention in the treatment of other diseases, and will undoubtedly be found applicable in some conditions of Rheumatism. The testimony in favor of aconite by others, *(Lombard, Stoerck, Rasenstein, Blom, Odhelius, Murray, Sigmond,)* and especially Lombard, affords undoubted evidence of its efficacy. The article, however, is frequently impure, and great care should be taken in its selection.

Iodine, and *iodide of potassium*, have been recommended both externally and internally. (1) I have no experience with either, except as a local application. *Tincture of soot*, and *creasote*, are spoken of: the former by Reich. *Extract of conium*, has been used, frequently repeated until dizziness is produced. *Extract of hemp*, is spoken of as a good anodyne. Also, *Extract of stramonium*. Elliotson recommends it particularly in Rheumatism of the face. *Belladona*, is advised by some.

The *Rhododendron*, (R. Crysanthemum) we are told by Dr. Guthrie, (2) is very generally

[1] Clendenning—London Med. Gaz. 1835. Sir B. Brodie—Lancet, 1832-3 Mackay—Lancet, 1839, p. 830. Taylor—Lancet, 1841, p. 347. Wardleworth —Lancet, March 30, 1839.
[2] Med. Comment. vol v. p. 434.

used in Russia and Siberia, both for Gout and Rheumatism, and rarely fails of success. It is said to be powerfully diaphoretic and narcotic, an effectual sedative, and occasionally an aperient. Dr. Horne experimented somewhat extensively with this article in the Edinburgh Infirmary, (1) but concluded that as a general medicine it was not to be preferred to Dover's powder. Dr. Halliday, of Moscow, in a letter to Dr. Paris, (2) suggests the probability, from his own observation, that the *Eau Medicinale* was made from the leaves of the Rhododendron. Many other remedies might be mentioned, but it would serve rather as a matter of curiosity than usefulness. I proceed to mention another course of treatment, which, when judiciously practised, I consider, in a large majority of cases, almost indispensable to speedy cure.

APPLICATIONS TO THE SPINE.

This was referred to in speaking of the pathology and symptoms. When the symptoms of Spinal Irritation exist, as already described, (p. 20-1-2-3) and uncomplicated with other disturbance, I rely mainly on applications to the Spine. If the patient is strong and robust and there is high inflamatory action, I bleed as already directed. (page 64) The treatment now becomes the same as in the

(1) Clinical Experiments. Edinburgh. 1780.
(2) Paris' Pharmacologia. vol. 1. p. 85.

case where the excitement is not very strong, or the patient very robust, and, in either instance, I would detract blood locally, that is, from the Spine, by leeches; the number proportioned to the excitement and constitution of the patient. Or, if the expense of leeches be an objection to their use, blood may generally be drawn to a sufficient extent by free scarification and the application of cups. If the stomach is foul, I would premise an emetic of antimony. If the liver or bowels are torpid in their action, I would give calomel in full doses combined with colchicum—and *immediately*, and as the chief remedy in either case, draw blood as already directed, from that part of the Spine upon which, pressure being made, the pain is increased in the part apparently diseased; or, in other words, from that portion of the Spine from whence originate the nerves that supply the affected parts. In general terms, if the Rheumatic inflamation is seated in the lower extremity, the lumbar vertebræ or sacrum is the spot; if the upper extremity is affected, then the lower cervical and upper dorsal vertebræ will be the proper place for the remedy. This will either cure or greatly relieve the disease, but if the cure is not perfect it will be necessary to apply a strong irritant to the same part, and immediately after the local bleeding. Occasionally, but very rarely, it may be necessary to repeat the irritant. The irritant I prefer is Granville's antidynous lotion, or ammonia sufficiently strong to produce imme-

diate vessication. The common blister also operates well. In recent cases, of moderate severity, the irritation alone will be sufficient, without previous general or local depletion, and, if the stomach and bowels, &c. are also healthy, it will be sufficient without any other treatment. But if the case be severe or of long standing, blood must be drawn freely from the Spine, previous to the use of irritation. If the digestive organs are in an unhealthy condition they, of course, should at the same time receive attention. In most instances the cure will be *immediate*, and there will always be evident *relief;* and under all circumstances the cure will be completed in far less time than by any other course of treatment. Patients will frequently describe the sensation as if the pain was *drawn* out toward the *Spine*.

Even practitioners who disbelieve in the connexion of Rheumatism with Spinal Irritation acknowledge the success of the practice, and attempt to explain it on other principles. Dr. Dungleson says, "of the different revellants cupping on the back has appeared to have been most frequently attended with happy results. An idea has been entertained that this has been owing to the depletion and revulsion effected near the origin of the nerves that are concerned in the articular inflamation. Whatsoever view may be entertained on this matter it is unquestionable that the highly sensitive integument of the back is an excellent locality for revulsion in many diseas-

es." The author *(Dungleson)* has seen the intense suffering in the joints as effectually relieved by cupping over the loins as by any other agency." (1) Others who have examined the subject more particularly, speak of the remedy in stronger terms. *(Mitchell, Thomas, Griscom, Teale, &c.)* Eberle refers to it on the authority of Mitchell, more especially as connected with chronic Rheumatism, and strongly recommends the work of Teale to the profession. Gallup also speaks of it without censure, which for him is equal to praise from any one else. The last edition of Good's Study of Medicine *(Harper & Brothers, publishers,* 1836,*)* contains a note by the editor recommending the subject for further investigation. Other evidence, to a considerable extent, is contained in single essays on the subject of Rheumatism and Spinal Irritation, published in the different Journals. Several of the authors quoted on this subject, though noticing this treatment, have evidently not examined the subject with care ; for they entirely omit, or only refer to the most important part of the matter, viz : the precise spot to which the remedy should be directed. Dungleson speaks of revellants to the loins, and would seem to infer that they should be applied to the loins in all cases. It can hardly be necessary to observe, after what has been said, that revulsives to the loins would afford relief only when the lower extremities are affected. Another speaks

(1) Practice of Med. vol. ii. p. 653.

of excitants to the back; whilst the essential point is to apply the remedy to the origin of the nerves distributed to the inflamed parts. Applications to the Spine will do no good unless applied to the right spot.

It is difficult to understand how a course of treatment so immediately successful should receive so little attention from many, and be entirely neglected by others. Were it a matter of speculation, or of difficult experiment, it might also be a matter of doubt, but depending as it does entirely upon a simple operation, and the result so speedily ascertained, it is astonishing that men of sufficient ambition and energy to write a book should neglect to notice, with care, this important remedy. It is a point that requires no especial skill to determine; any practitioner who knows where the Spine is, and the distribution of the Spinal Nerves, and is possessed of common discrimination, can decide the matter to his satisfaction. If he examines with care, he will find that *in every case in which pressure on the Spine, at the proper place, increases the pain in the affected joint, cupping, leeching, blistering, (either or both, as the case may require,) that place will cure the joint.* Even if there is no tenderness the same treatment will give relief. I therefore, whatever may be the general treatment, never omit this local treatment. It is also worthy of notice that however little confidence some may place in these applications, none

who give it the slightest notice pronounce it useless or hurtful.

But it may reasonably be asked, If this be true, and the treatment is effectual, why is it that the course ordinarily pursued is so generally successful? I answer, because, as stated in the early part of this essay, the Spinal Irritation is itself frequently a secondary condition, and is removed by the treatment pursued removing the cause; but in many other instances the Spinal Irritation is primary and idiopathic, and nothing but local applications to the Spine will cure it. These are the cases that constitute obstinate, and by ordinary means, incurable Rheumatism. Yet these are precisely the cases that yield most promptly to the local applications, and illustrate most beautifully the truth of the previous observations on this subject.

Metastasis will occasionally occur under this treatment, as it will under any treatment. If this does take place, precisely the same symptoms, and the same connexion with the Spine will occur in the secondary attack as in the first, and will require the same treatment, with this exception—that it will be less necessary to repeat the general bleeding. Indeed I have never found this necessary. Neither will the metastasis under this treatment take place to the corresponding opposite limb; that is, it does not change from one leg to the other, or from one arm to the other: and the reason is, because the previous treatment,

if properly applied, removes the irritation from the nerves of both sides alike ; and this fact in regard to change of seat under treatment is still further evidence to my mind that the disease is, in the circumstances here mentioned, located in the Spine. Neither do I look upon this erratic disposition as unfavorable. The second attack (under this treatment) is *always* lighter than the first, and yields immediately to the local remedy. Even the translation of Rheumatism to the pericardium and heart, I have not found so obstinate or alarming, as it has been under other treatment.

I have seen acute Rheumatic attacks, by metastasis, to the pericardium, stomach and brain, yield as soon as the remedy could be applied to the proper vertebræ. I would not by any means imply that Rheumatic carditis is Spinal Irritation, but I have not the slightest doubt that both Rheumatic carditis, and other affections of the heart, which eventually proceed to fatal disorganization, have their origin in *functional* disturbance, caused in the first instance by Spinal Irritation. What was in the first place functional disorder, soon becomes organic disease. It is unnecessary to describe with more minuteness the exact spot to which the local remedies should be directed for Rheumatism in all its separate locations. If the principles already laid down are clearly understood, no judicious physician will be at a loss to select the proper remedy or the proper place to apply it.

It will, perhaps, not be out of place to relate a few cases illustrating this treatment.

CASE I.

This was not very severe, and did not require general blood-letting. *March* 9, 1839. *John B——r*, aged 14, of good constitution and active habits; taken with a chill, then pain in right ankle, knee, leg, and also in right hip. Skin red and tender; some swelling about the affected joints; pain increased by pressure on lower lumber vertebræ; bowels rather costive; tongue slightly coated. Gave 20 gr. of calomel and 1-2 drachm of colchicum, and cupped the spine as far as tender. He was almost immediately relieved, and in two days was well. *June* 25. He was again taken with pain in the right knee, which was swollen, tender, and extremely painful. Spine tender as before. Stomach and bowels regular. Did nothing but cup the Spine, and the next day he was at work. *July*. He had a similar, but less severe attack, confined to the knee. Directed only Croton oil rubbed on the Spine; as soon as this irritated the skin the knee recovered. He continued the counter irritation about a week and has since had no return of the disease.

CASE II.

March 1839. *Thomas D——r*, aged 28, a laborer of full and plethoric habit, was suddenly

taken with acute Rheumatism of the ankle joint, characterised by chill and succeeding fever; swelling, redness, and intense pain in the ankle. Pulse strong and full; tongue slightly coated white; bowels free and healthy; Spine tender; general blood-letting, until an impression was produced on the system, gave relief—but the ankle remained swollen and painful. A blister was applied to the Spine, and the ankle was well before the blister had entirely healed.

CASE III.

Nov. 20, 1841. *John B——r*, a labourer, aged 45; generally enjoyed good health. He had now suffered for five days from acute Rheumatism in both knees and both ankles. I found him in bed and almost helpless. He had been bled and purged, and was then taking guaiacum and Dover's powder. The disease was somewhat subdued, but was still severe. On examination the lower lumbar vertebræ were found tender, and a blister was applied. This drew well, and in two days the inflamed joints were cured.

CASES IV.–V.

These cases were related to me by another Physician, and occurred in his practice.

They are interesting from their obstinacy, and the variety of remedies employed. The first

was a young lady aged 17 years. She first felt a pain in her right knee joint, in stepping into a waggon. The pain increased, and swelling began and continued until the knee became exceedingly swollen and painful, and so tender, that the mere brushing over it the feather of a quill would cause intense pain. The disease continued until her constitution had become greatly impaired. She had hectic fever, and all its attendant symptoms. The limb had become bent nearly to a right angle. Different judicious physicians had exerted their skill to cure her in vain —among other things, she had taken iodine for four months. After eight months of faithful attendance, she was given up as incurable, and amputation decided upon, as the only remaining resource, to prevent the disease completely exhausting her constitution. At this time my informant saw her, and on examination, found that pressure on one of the lumbar vertibræ increased the pain in the knee. Leeches were recommended and applied, and immediately after, a blister to the same spot. As soon as this healed, another was drawn ; and this course was repeated two or three weeks. On the application of the second blister, the pain in the knee decreased ; the appetite and general health improved, and in a few weeks was comparatively restored. The limb could now be straightened, and the pain and tenderness had disappeared. But the severity and length of the inflamation had produced

disorganization of the articular structures, which, probably, will never be entirely restored. The acute symptoms, however, were all removed by the leeches and blisters alone, and the disease relieved of some of its most troublesome and doubtful symptoms. Had the same treatment been pursued in the commencement, there is no reason to doubt but that a complete cure would have been speedily accomplished. It may be said that this was not a clear case of Rheumatism, neither am I able to assert positively that it was; but it was so pronounced by physicians fully capable of judging, and whose opinion, when positively given, I would take with full confidence.

The next case was a boy, 10 years old, who for three years in succession had suffered from acute Rheumatism: sometimes in the arms and again in the legs. The disease had heretofore continued several weeks in spite of any treatment. He was now labouring under an acute attack in both arms, and was taking stimulant and anodyne diaphoretics with partial relief. The Spine, on examination, was found tender, and a blister was applied. This greatly relieved the arms, and a second one completely cured it.

CASE VI.

This was a case of Pericarditis by metastasis from the ankle. The patient, a feeble man of fifty years, after a variety of treatment, and

among other remedies a Thompsonian course, was also advised to bathe his foot in cold water. He did so, and the ankle was soon relieved; but this was followed by difficulty of breathing, pain and anxiety about the heart.— Such was his condition when I saw him, and nothing but simple domestic remedies had as yet been used; his family supposed him dying. I found the dorsal vertebræ tender and applied three cups on each side of the spinous processes. This relieved the most urgent symptoms. In the evening I repeated them and in a few days he was as well as usual.

CASE VII.

This case I considered at first as simple neuralgia, but subsequent examination of the case, as recorded at the time, suggested doubts as to the truth of the opinion. A recurrence of the attack, and a more full investigation into the constitution of the patient and the particular symptoms of the case, fully convinced me that if it was neuralgia, it was *Rheumatic* neuralgia. The patient was a female, of a nervous temperament, and a constitution broken by severe and long continued attacks of intermitting and bilious fever. The present health, however, was tolerably good. The stomach, bowels, &c. performed their functions regularly. She had been pregnant two months, but she had had similar attacks previous to this when

she was not in this situation. The attack commenced with pain extending entirely around the chest; the patient said it felt "as if a band of iron, 3 or 4 inches wide, was around her and being screwed tighter and tighter." The pain rapidly increased until it became almost insupportable. There was no heat of the skin, nor any unnatural coldness, except the feet; the pulse was frequent and feeble. It yielded in about two hours to large doses of morphine and brandy, and to mustard applied entirely around the body. The next attack occurred just a month from this. I now used less morphine and no brandy, trusting chiefly to mustard. The pain yielded as before, but the subsequent condition of the patient was much better. A third attack occurred three weeks from the second. It was of equal severity, and yielded to mustard alone. A few weeks after this there was an attack of well marked *sciatica*. It yielded in two days to colchicum, sufficient to purge, and a blister to the loins and sacrum. The patient had once suffered from acute articular Rheumatism and subsequently from chronic.

CASE VIII.

This patient was siezed in a manner very similar to the last mentioned. She was relieved by mustard alone, but there followed distressing nausea with some tenderness at the epigastrium, which extended, in less degree, over the whole

bowels. The nausea was cured by mustard to the epigastrium and Spine. But the tenderness of the bowels remained, and in addition, they became excessively painful when they were evacuated. Even a warm water injection caused agonizing pain. Repeated irritation of the Spine with mustard, and the moderate use of morphine, cured it in two or three days. In the latter attack the bowels were torpid, and the injections were necessary to move them. I have had frequent cases of a similar but much milder character: that is, the bowels were tender on pressure and painful when evacuated; and in every instance, since I have carefully inquired, I learned that there had been previously acute Rheumatism of some part.

It is unnecessary to increase the size of this essay by repeating cases. I have endeavoured to describe the treatment of acute Rheumatism on general principles and in plain terms. If I have succeeded, the matter is sufficiently clear without further explanation.

CHRONIC RHEUMATISM.

The synonyms, as given by Dungleson, are : Rheumatismus Chronicus, Rheumatismus Vulgaris, R. Inveteratus, R. Habitualis, R. Frigidus, Arthrodynia, Arthritis Arthrodynia, Arthrosia Chronica, Rheumatalgia; *Fr.* Rheumatisme Chronique; *Ger.* Chronische, Inveterirtue, habituelle Rheumatismus; Langwierige Gliederreissen.

Chronic Rheumatism is described by some as acute Rheumatism, half cured. Others with more correctness add, that it may also occur independent of, and without being preceded by acute symptoms; yet constituting in all its essential characteristics, the same disease in a milder form.— The difference in the two forms is no more than might be expected from the difference of intensity, and no more than occurs in other inflamations. It can scarcely be regarded then as a disease of debility, although the recuperative powers of the system may often be so exhausted by long protracted inflamation, however mild, that debility may supervene as a secondary condition, in the same manner as in other diseases. In chronic Rheumatism then, there is a low grade of inflamation, and it does not affect the nature of the case, whether this occurs as a sequel to the acute, or whether it assumes this form at its first appearance. The remarks already made in regard to

the *Cause, Pathological character, Location, Metastasis, Termination, &c.*, apply both to acute and chronic Rheumatism. Indeed, if we examine the subject with care, it will be found a matter of no small difficulty to draw the exact line between the acute and chronic stages of this disease, and cases not unfrequently occur, especially of *Lumbago* and *Sciatica*, which pass from one stage to the other. Neither is it easy to determine whether these varieties (Lumbago and Sciatica) should be described as acute or chronic; but it is not a matter of very great practical importance, under which head they are arranged, provided we recollect the fact, that they may be either acute or chronic, and that the treatment should be active in proportion to the severity of the symptoms.—I think them to be more frequently chronic, and therefore include them, and also one or two other varieties, under this head.

THE SYMPTOMS

Of Rheumatism in the milder or chronic form, are less uniform than in the severe or acute. I notice two varieties.

1st. There may be a mild state of febrile excitement; the pains shift as in the acute state, are generally increased by warmth, and are worse at night; there is frequently œdema of the joints, a slightly quickened pulse, a white tongue, and perhaps costive bowels. This condition is often described as sub-acute.

2nd. In its still more chronic form, there is no manifest fever; the pains are more permanent, generally relieved by warmth, no swelling or redness. Pain not felt often, except on motion or change of atmosphere; when there is pain on first moving, it disappears when the body becomes warm by exercise. The circulation is not accellerated; tongue generally clean, and bowels not necessarily costive.

In both varieties, as in the acute, the spinal column will often be found tender at the place corresponding to the seat of the disease, and not unfrequently the patient will describe the pain as extending from the part affected to the spine, even when no pressure is made on the back.

In regard to the *seat* of chronic Rheumatism, we should perhaps remark that it is less frequently internal than the acute. *(Andral.)*

Metastasis occurs less frequently.

THE DURATION

Of chronic Rheumatism is uncertain, and often very tedious. The symptoms may cease in a few hours, or continue unchecked for an indefinite period. When the disease does not yield to remedial measures, it may continue in a mild form, and cause but litle inconvenience, or it may continue with considerable severity and eventually exhaust the system. Effusions take place into synovial capsules, the ligaments become perma-

nently thickened, the tendons contracted and the limb emaciated. The joints are thus altered in form, and their motions become painful and impeded. It is also mentioned that similar joints become distorted exactly alike—that is, that the distortion of one joint is usually a perfect model of that of its fellow.

THE PROGNOSIS

Is not fatal, except as the constitution may be exhausted by want of sleep, pain &c; or, the disease be located in some important internal structure.

THE DIAGNOSIS

Of chronic Rheumatism is not generally a point of much difficulty.

Periostitis from syphilis, somewhat resembles it; but the previous occurrence of syphilis, and other attending circumstances, will prevent mistakes.

In syphilitic Rheumatism, also, "the *nocturnal* pains, with an almost entire relief during the day, is a very characteristic symptom. In this disease also, the structure of the joints, viz: the ligaments, tendons and synovial membrane are not so much affected as the periostium about the head of the bones; so that there is usually much less inconvenience on motion."

To distinguish between chronic articular Rheumatism and chronic gout, is sometimes more difficult, requiring considerable care in the examination. But a careful attention to the symptoms, as laid down when speaking of acute Rheumatism, especially the habits of the patient, the state of the temper previous to the attack, the joints affected, the duration of the attack, &c., will render the case sufficiently plain. The variety known as

Sciatica

Might be mistaken for *inflamation of the hip joint.* The following points of difference are mentioned: *(Armstrong.)*

In sciatica there is no swelling; in inflamation of the hip joint some swelling is evident on comparing the two hips.

In inflamation of the hips, pressure in the groin in the direction of the trochanter minor, invariably gives pain; pressure suddenly applied under the foot gives pain.

This does not happen in sciatica.

In inflamation of the hip joint the patient lies in a peculiar posture, so as to favor the diseased joint; generally the spine is twisted in a contrary direction to what happens in sciatica.

In hip disease, motion increases the pain.

The limb, in hip disease, first becomes longer, then shorter, and, as the disease goes on, the leg is drawn up.

In hip disease the pain is first more conspicuous about the knee.

The variety known as

Lumbago,

Affects the psoas muscles principally, with their fasciæ; also more or less the lumbar and other muscles in their vicinity. There is rigidity, inability of muscular motion, severe pain on attempting to move ; without effusion and without swelling.

Lumbago should be distinguished from psoas abscess.

In *Psoas Abscess* there is uneasiness in the back, with a sense of weakness when the patient stands or walks, and this increases as the toes are turned far inward or outward by rotation. Flexion and extension of the limb produces distinct uneasiness in the back. Patients suffering with psoas abscess, in attempting to extend the limb backward, will also incline the trunk forward. They will not do this in *lumbago*. As the disease advances the diagnosis is plain.

Lumbago may, it is also said, be mistaken for *Chronic Hepatitis*. Armstrong once made this mistake, though how I can hardly conceive.

An *overloaded Colon* is sometimes attended with pain in the back and hips, resembling both lumbago and sciatica. A careful examination of the bowels will at once detect this condition.

"Lumbago is distinguished from *Nephritis* by the absence of pain along the ureters—of retraction of the testicles—of the frequent desire to void urine, and of the nausea and vomiting which characterise the Renal disease." *(Eberle.)* "One of the best guides is the effect of rising up and sitting down. In lumbago, when the patient first attempts to rise the pain is extremely great." *(Armstrong.)* The same pain is caused by any motion of bending the body forward. To this I would add that in nephritis there is more or less tenderness on pressure over the *kidneys*, anteriorly or posteriorly. In lumbago, there is generally tenderness on pressure over the *Spine*, and this pressure increases the Rheumatic pains. Boerhave in his own case confounded nephritis with lumbago.

Another variety of chronic Rheumatism is

Pleurodynia.

This attacks the side, and often suddenly like a "stitch," which continues for a time and then passes off; but at other times it is of longer duration. It may be distinguished from *Pleuritis* in the absence in the former of the febrile symptoms and of the physical signs, (dulness on percussion, absence of the respiratory murmur, ægophony, &c. &c.) There is also more or less external tenderness of the muscles of the chest in pleurodynia. In pleuritis the pain is internal and ad-

mits considerable pressure. In pleurodynia it is external, and if severe is increased by the slightest pressure. The Spine is also generally tender. In pleuritis too the pain is fixed. In pleurodynia it is usually more or less flying; occasionally however it is also fixed: when we must depend on the other constitutional symptoms. We should also recollect that pleuritis may occur in connection with a Rheumatic inflamation of the external muscles and therefore, if the case be severe and protracted, we should not be satisfied with the first diagnosis, but watch lest pleuritis subsequently set in.

Nodosity of the joints is mentioned by Dr. Haygarth as an affection that may be mistaken for Rheumatism. "These nodes" he says "are chiefly distinguished from acute Rheumatism because they are not attended with fever. The tumor of the joints is much harder, more durable and less painful in the former than in the latter disease. The nodes are totally different from chronic Rheumatism, because the latter chiefly affects the muscles, and is seldom attended with any swelling of the affected parts." (1) If in addition to this we consider the constitution of the patient, and the exact history of the case, we can scarcely confound the two diseases.

There is another disease described by Sir Benjamin Brodie as bearing a relation both to Gout and Rheumatism. "The synovial membrane be-

(1) Clinical History of the Nodosity of the Joints.

comes thickened so as to occasion considerable enlargement and stiffness of the joints, there being at the same time but little disposition to the effusion of fluid. In the first instance the disease is often confined to the fingers ; afterwards it extends to the knees and wrists ; perhaps to nearly all the joints of the body. Throughout its whole course the patient complains of but little pain, but he suffers, nevertheless, great inconvenience in consequence of the gradually increasing rigidity of the joints, and at the number which are affected in succession. The progress of the disease is usually slow, and many years may elapse before it reaches what may be regarded as its most advanced stage. Sometimes, after having reached a certain point, it remains stationary; or even some degree of amendment may take place. I do not, however, remember any case in which it could be said that an actual cure had been effected. The individuals who suffer in the way which has been described are, for the most part, those belonging to the higher classes of society, taking but little exercise, and leading luxurious lives." The most remarkable point in the above disease is the entire freedom from pain enjoyed during its progress.

Phlegmatia dolens has been thought to occur more frequently in persons who have previously suffered from Rheumatism. Dr. Francis,(1) however, says he has not been able to trace any par-

(1) Denman's Midwifery : Edited by Dr. Francis. p. 693. note.

ticular connexion between the occurrence of phlegmatia dolens and a Rheumatic diathesis. Gallup, (1) and others maintain that there is a very striking similiarity between the diseases. Yet we must not forget the anatomical difference between the thick capsules of the joints and the thin accommodating structure of the fascia of the leg. There is undoubtedly some ground to suppose a resemblance as above stated, though to what extent is yet uncertain.

TREATMENT.

If the view we have taken of chronic Rheumatism be correct, it naturally suggests the course of treatment. Antiphlogistics, in the beginning, in proportion to the acuteness of the symptoms. After these symptoms are subdued, or if the disease is in the first instance strictly chronic, then the nature of the case points more to stimulating diaphoretics, local applications, and such other treatment as any digestive or other derangement may require.

Antiphlogistics.

"From the peculiar *grade* of inflamation that constitutes sub-acute (chronic?) Rheumatism it very seldom happens that a vigorous treatment is necessary, or even proper; yet cases do occur in

[1] Institutes of Medicine, vol. ii. p. 232.

which it becomes essential to the cure that active means should be used." *(Dewees, p. 763)* General bleeding will not be often required, and the necessity of its use will be indicated by the same rules that hold in the acute stage. The constitution of the patient, the state of the circulation, the severity of the attack, and its complications, &c. each have considerable weight in determining the necessity and extent of depletion. This is an important consideration in the treatment of chronic Rheumatism. *The excitement, though trifling, should be subdued before stimulating remedies of any description are employed.* If we are not careful on this head our subsequent treatment, though *curative* in proper circumstances, will fail and perhaps aggravate the symptoms.

If general bleeding be thought unnecessary and yet some depletion is required, blood may be taken by *cups* and *leeches;* and this will generally be required although there may be no "evidence of increased vascular action except what might be inferred from the intensity of the pain, and the inability to suffer the motion of the part." *(Dewees)* The place of their application is generally the part affected, and this will be found useful; but, instead of applying them here, I would apply them to the Spine, as directed in acute Rheumatism. I would do this because I believe that chronic Rheumatism, even more than acute, consists in an irritation of the Spinal nerves. I do also know, from abundant experience, that this

remedy applied to the Spine is much more certainly and speedily successful than if applied to the painful part. Whatever may be the explanation, the fact—so far as my experience goes—is as here stated. Such is also the positive evidence of others. *(Teale, Mitchell, Thomas, &c.)* Dr. Eberle also bears partial evidence to the success of this treatment. He says "I am satisfied that in some cases, at least, chronic pains of a Rheumatic character depend on Spinal irritation." "If in such cases leeches or cups be applied over the diseased portion of the Spinal marrow almost immediate removal of the Rheumatic pains will be effected." Dr. Eberle further mentions a case where the patient had complained of constant and severe pain in the left foot for several months, and the usual means for the cure of such affection procured only slight temporary benefit." "I at last" says he "examined the track of the Spine and found two of the lower lumbar vertebræ morbidly sensible to pressure. I directed 30 leeches to the part, which afforded great relief, and in a few days afterward, more blood was drawn from the same spot by cupping, and this had the effect of entirely removing the disease in the foot." [1] I could add many similar cases from my own note book, shewing the complete success of this mode of practice. Generally, as already stated, it is better to commence with leeches or cups, and a very good plan is to apply a fewer number of

[1] Practice of Medicine. vol. i. p. 403.

leeches than is actually required, and then to apply the cups over the leech bites; in some cases however, simple counter irritation is sufficient.—For this purpose, Granville's lotion, the strongest aqua ammonia, or cantharides, to vesicate, may be used; or, croton oil *(oleum tigli)* rubbed in, produces a fine eruption; or, what will generally answer equally well, and is much cheaper, is a liniment composed of Croton oil one part, oil of cloves one part, and strong aqua ammonia six parts. A saturated tinct. of iodine applied with a brush once or twice a day until sufficient irritation is produced, is, in mild cases, useful; so also, is a strong camphorated spirit. After the disease is subdued, a plaster of simple Burgundy pitch will be beneficial in preventing future attacks. Though relying upon these and similar applications to the Spine, as an essential part of the treatment, I would by no means neglect other important adjuvants in the management of the case. Attention should be paid to the condition of the digestive organs; and disorder of these, or indeed any other complication, should be removed. If the bowels are torpid, 5 or 10 gr. of calomel or blue mass should be taken at night, and followed in the morning by some mild laxative, such as oil, rhubarb and magnesia, magnesia and salts, or what is often preferable, calc. magnesia and tinc. of colchicum. Spirits of turpentine 1 drachm, and castor oil 1 ounce, is good in these cases; or if something more active is required, spirits of

turpentine 1 drachm and calomel 10 gr., is a safe, speedy and mild cathartic. Cathartic doses of calomel are sufficient in chronic Rheumatism; for it must be borne in mind, that the state of active inflamation in which large doses of calomel are so effective, is not here present.

When there is general sluggishness or langour of the system, stimulating *diaphoretics* have been recommended to be freely taken. For this purpose gum guaiacum has been highly extolled. Some prefer it alone.

R. pulv. gum guaiac.	1 oz.
" " Arabic,	3 dr.

Mix well, add gradually of cinnamon water 10 oz. Take for a dose three or four table spoons full daily.

Others prefer it in combination with Dover's powder, or sulphur.

R. pulv. gum guaiac.	10 gr.
Ipecac. comp.	3 gr. vel.
Sulphur,	6 gr.

Mix, take one every four hours.

Others use the volatile tinct.

R. pulv. gum guaiac.	4 oz.
" " pimento,	1 oz.
Carb. soda,	2 dr.
Sp. vin.	1 lb.

When about to be used, add of volatile spirit of ammonia 2 drachms for every six ounces of the tinct. Dose from one to three spoons full (tea

spoon) four times a day, in sweetened milk. Others use tinct. of guiac. and tinct. of colchicum, combined in equal proportions; dose, 30 or 40 drops three times a day. The famous remedy known as the "Chelsea Pensioner," is supposed to consist of guaiac. rhei., potass. bitart., sulph. and nutmeg. So far as my experience goes, I do not know that guaiac. possesses any advantages over colchicum.

During the use of these, or other remedies, relief from pain will be experienced by the use of stramonium, *(datura stramonium)* either the extract of the leaves, (1 gr. for a dose) or the tinct. of the seeds, (20 to 30 drops for a dose.) In some parts of this country stramonium has been used for a long time as a domestic remedy for chronic Rheumatism. It is of acknowledged efficacy in other chronic pains, and is recommended by several judicious practitioners in this complaint. *(Eberle, Elliotson, Marcet, Scudamore, &c.)* I have used it as an anodyne for some years, with much satisfaction, and especially for patients with whom opium did not agree. Other narcotics may also be used as here indicated, such as opium, conium, belladona, aconite, &c.

Calomel and opium is also advised in chronic Rheumatism, in the same manner as directed in acute. Dr. Johnson says it is the treatment he has "had resource to for 20 years past." (1) This course is much improved by the addition of the

(1) Medico. Chirurg. Review, 1826, p 566.

sarsaparilla root. A good form is the syrup or decoction; or, what is still more convenient, the comp. extract, as prepared by Carpenter, and to be obtained at most of the druggists. Some prefer the combination of corrosive sublimate and sarsaparilla.

If the disease assume an intermittent type, advantage will be derived from sulphate of *quinia*, or, *arsenic*, after proper preparation.

Warm bathing will often be found of much benefit. In cases of long standing it may be used every evening, and as an adjuvant to either course of treatment that may be chosen. Friction should also be employed at the same time.

I can fully testify to the good effects of treatment as above directed, but the remeies on which I chiefly rely are the applications to the Spine. If this course be so effectual in the cure of acute and chronic Rheumatism, it may reasonably be asked, Why has it received so little attention, and why do so few physicians practice it? One reason is, that many physicians follow, blindly, the rules as given in books, and never stop to investigate for themselves, or examine the new suggestions of others. Some again, from principle, will receive nothing unless it bears the stamp of age and the recommendation of the schools. A few would pay a superficial attention to the subject, but in examining the Spine (being deficient in anatomical knowledge) examine in the *wrong place*. The remedy must not only be applied to the Spine, but

as before stated, it must be applied to the *right spot*. Another difficulty is, that some few physicians have been so *ultra enthusiastic* on the subject of Spinal irritation, that others have been disgusted with the whole matter, and pass it by. This is wrong. The folly of a fool, should never prevent a rational inquirer from seeking knowledge. And because a few pronounce *every* disease Spinal irritation, is no reason why others should deny its very existence. Any careful and observing physician who is acquainted with the distribution of the Spinal nerves, and will examine cautiously in cases of acute and chronic Rheumatism, the connexion between the disease at the *root* of the nerve, and the *apparent disease* as developed at its extremity, will find as I have stated, in a large number of cases, one or more vertebræ tender on pressure, and the use of remedies as above directed, will be found successful in curing a disease which by other treatment will always be more or less obstinate.

But it must not be expected that any treatment will cure, *instanter*, a disease of months or years standing. We must exercise patience and perseverance as well as skill. Yet, in every case where the Spine is tender, sensible relief will be felt from the first application of the cups and leeches; increased benefit will follow each succeeding application, and in a very short time the most tedious case will be cured. In one instance I adopted this treatment when pressure on the

Spine did not increase the Rheumatic symptoms. There was no apparent tenderness. I had before tried calomel alone—calomel and opium—emetics—cathartics—diaphoretics, stimulants and local applications, without much relief. The case seemed incurable. By way of experiment, I cupped the Spine at the proper point. This gave immediate relief. I repeated it six times, and the patient was cured of a disease from which he had suffered for two years, and had tried in vain almost every remedy. I, therefore, have confidence in this course, and for 5 or 6 years have constantly pursued it, and in no instance without evident benefit, and a speedy cure, unless there was some actual disorganization of the parts diseased. I may perhaps mention a few additional cases illustrating this treatment. The two first cases are dated 1840.

Mrs. S——, aged 45, of good constitution, and accustomed to hard work. She first applied to me in 1840, complaining of pain on motion, and slight tenderness but no swelling, in the wrists and elbows ; it had been better and worse for several months—never very severe. The stomach and bowels were regular. On examination I found that pressure on the lower cervical and upper dorsal vertebræ increased the morbid symptoms. Croton oil was directed to be rubbed on the Spine. As soon as the skin became irritated the complaint was removed. About six months

after this she returned with the same symptoms, and was cured by the same remedy. I also directed a laxative pill to be taken occasionally. She has had no attack since.

John B——e, aged 16, was exposed to the rain and taken with pain in most of the large joints; pain not very severe, no redness or swelling, and but little tenderness—pain was increased by motion—circulation not accelerated—tongue clean—bowels regular—Spine tender throughout. I directed a hot poultice of hops and vinegar. This cured the pain and the next day he was well.

Case 3.—This was a case of pleurodynia, Oct. 20, 1841. *William F——r*, aged 30, of a weak constitution, and spare form; applied for advice to cure a pain in the side with which he had been troubled for five or six years. He had been variously treated by three different physicians, and was generally relieved for a time, but was never entirely free from the pain and soreness for any length of time together. On examination I found the pain confined entirely to the parietes of the thorax, and mostly to the intercostal muscles, and connected with three tender dorsal vertebræ. Cupping the Spine twice cured it. He had no return for a year, when he was suddenly taken with the painful symptoms of acute pleurisy, but without the febrile symptoms or physical signs. The Spine was again morbidly tender. Once cupping removed the pain, which has not since returned.

These cases illustrate the good effects of proper applications to the Spine alone, where there is simply idiopathic irritation. Again, the irritation itself may result from disorder of the chylopœtic viscera, and general remedies are indicated.

Case 4. *Wm. R——u*, aged 35, of strong constitution, temperate and active habits; applied (1842) for the cure of sciatica, with which he had been afflicted for a year. The attacks were mostly at nights, and often every night for three or four in succession. He had used the ordinary remedies, without any perceptible relief. There was slight disorder of the stomach, and considerable torpor of the bowels. Supposing that general remedies had been sufficiently tried, I only directed salts to loosen the bowels, and a blister to the Spine. This gave relief; but the pain would return as the blister healed. I repeated the vesication several times, with the same result. I then directed a blue pill every other night, and regulated the bowels with the calcined magnesia and colchicum, so as to produce one stool a day. At the same time I cupped the Spine daily; each application of the cups gave immediate relief—and that permanent. In a week he was cured, and has since been well.

Case 5.—March, 1842. *Mrs. F——*, aged 25, of delicate constitution and active habits, generally enjoyed good health; had been troubled for

some months with pain and weakness in both knees, the unpleasant feelings were increased by pressure on the lumbar vertebræ. Croton oil, rubbed in, cured the complaint for a time. I then found that the bowels, which I had been told were free, were slightly but regularly torpid. A mild laxative of calomel 1 gr. and comp. coly. 3 gr., taken daily, soon restored them; I re-applied the oil and the pain was *permanently* removed. It is now two years since.

Case 6.—This was a case of Rheumatic Dysmenorrhœa. Miss Sarah W—, aged 18, of strong constitution, and, except dismenorrhœa, enjoyed general good health. She had suffered slightly the most of the time from pain in the uterine region; this became greatly aggavated near the monthly period, and often amounted to intense agony. During the paroxysm, when most severe, she was usually bled, and took laudanum in 1 drachm doses, which eventually gave relief, but never cured. On examination, I found the Spine tender. I applied four cups, which gave immediate relief. The paroxysm was cut short at once—a result which had never occurred under previous treatment. A dull pain still remained in the uterus; a second cupping removed it, and she menstruated without more than ordinary pain for six months; when, after exposure to rain a few days previous to the return of the menses, the pain returned with its former severity; cupping, as

before, cured it. She is now more careful; and if from imprudence she takes cold and feels any indication of pain, she immediately applies a mustard poultice, which prevents it; but unless imprudent in exposing herself to cold or wet, she menstruates regularly, and with no more than ordinary pain. I could relate many instances of a kind, generally called dysmenorrhœa, which might be called Rheumatic with as much propriety as any thing else, and which were removed in a similar manner—sometimes by leeches, sometimes cupping, and again by counter irritation or a poultice of hops and vinegar.

But it is unnecessary to multiply instances; the above are sufficient to illustrate the Spinal treatment, and any one who will carefully and honestly observe for himself, will frequently see every variety of chronic Rheumatism and chronic Rheumatic pains more or less dependant on the Spine. He will also find, that, if judiciously applied, remedies to the Spine will always afford relief, and generally promptly cure. General treatment, I need hardly repeat, should always be employed when demanded by other constitutional symptoms.

It may further be objected to the opinion I have urged, viz: that most of the cases of Rheumatism are owing to disease of the Spinal nerves —that these are instances of simple neuralgia. There is undoubtedly a "Rheumatic neuralgia,"

as already stated, *(page 57)* that is, the nerves, or their envelopes, become the seat of Rheumatic inflamation; but I cannot see how this can be mistaken for acute Rheumatism, and especially acute articular Rheumatism. In the chronic form, an error might be more liable to occur; but even this must result from carelessness or ignorance, rather than any real difficulty in the diagnosis.

The symptoms of neuralgia are sufficiently well marked to prevent confusion; but whether it be neuralgia, Rheumatism, or Spinal irritation, the fact is, as here stated, that the great majority of cases commonly known and described as chronic Rheumatism, are more or less connected with the origin of the Spinal nerves. It is supposed by some that it may be in this, as stated by *Valleix*, (1) of neuralgia, that it is not dependant upon irritation at the origin *alone*, but at certain focal points where the nervous filaments of the larger and deeper nerves are distributed upon the tegumentary tisue. One of these focal points is immediately over the transverse processes of the vertebræ. But I am fully satisfied that the irritation in Rheumatism is not in focal points alone, although I have frequently observed that there were, in *addition* to the Spinal irritation, points from which, when pressure was made, the pain radiated in different directions; yet it is evident, from the effect of treatment, that these points are

[1] Traite des Nevralgies, ou Affections Douloureuses, des Nerfs, par F. L. I. Valleix. A Paris, 1841.

not the *root* of the evil, for the pain must be often hunted from one focal point after another, until the remedy is successively applied to each; whereas, if applied at once to the Spine, the pain is at *once* removed. This is a point, however, that merits further investigation, and I know of no better book to aid in the inquiry than the work of Valleix.

Local Applications.

Chronic Rheumatism, as above treated, does not necessarily *always* require local applications of any kind, but it does frequently happen that the disease has been so long seated, that the different structures of the affected part become more or less injured. Both the lymphatics and smaller blood vessels become weakened, and require some stimulating application to enable them to resume their healthy tone of action. For this purpose ammonia; ammonia 10 parts, croton oil 1 part; tinct. of iodine, turpentine, and other articles of a similar nature, will be found useful. I generally prefer the tinct. of iodine; this is both anodyne and stimulant. Pulverized camphor and lard, equal parts, is a soothing and often sufficiently stimulating application.

Other articles have been employed in the local treatment of chronic Rheumatism. *Oil of mustard* is recommended by Wolff. Dr. Lombard prefers

to all other ointments, one made of *cyanide of potassium*, 2 to 4 grs. to the oz.

Carburet of sulphur is recommended by Lampadius. In Frieberg, a mixture of one part of camphor, two of carburet of sulphur, and four of spirits of wine, is a very common external application in Rheumatic pains. *(Dungleson's New Remedies.)* Others speak favorably of the same article.—*(Kappe, Mansfeld, Wutzner, Otto, &c.)*

Veratria has been highly extolled, especially by Turnbull. The tincture or ointment is used (veratria 20 to 40 grs. to the ounce.) Care should be had that the cuticle is sound. It may be used to the extent of from 4 to 8 grs. the day. Others also recommend it, but less enthusiastically. *(Majendie, Bardsley, Jackson, &c.)*

Aconitia is also proposed by Turnbull, (1) Lombard and others, used the same as veratria. Two late writers *(Pereira* and *Curtiss)* recommend the tincture, one to two drachms, rubbed in after leeches, aperients, &c., if these are necessary. *Delphinia* is also spoken of: it possesses a similar action. *Cupping*, dry and wet, has been used as a local application, without reference to its general effects. *Oil of Ergot*, two or three drops rubbed in. *Oil of Cajeput*, combined with olive oil. The *Torniquet*, applied as in acute Rheumatism. *Oiled silk, carded wool, cotton wadding, &c. &c.,*

[1] Treatise on Painful and Nervous Diseases, 1837.

have each been used with asserted benefit. *Vapor of Camphor* has lately been used with success. *(M. Delormel and M. Dupasquier.)* The method of M. Dupasquier is described in the *Revue Medicale for* 1826. The patient is made to sit upon an open-seated stool, under which a chafingdish of *coals* is placed. A plate of iron is then put on this dish, and the patient being enveloped in a blanket, a small spoon full of powdered camphor is thrown upon the heated plate every five minutes, until about an ounce of camphor is used. The patient perspires copiously: he is immediately put into a warm bed, and supplied freely with warm diluent drinks. This is to be repeated for a few days, when the pains are permanently removed.

Dewees extols a liniment composed of laudanum, sweet oil and sulphuric ether, rubbed in every hour or two until it gives relief.

Friction with the hand, flesh brush, flannel, &c., will always be useful, and should never be omitted.

Dr. Balfour, of Edinburgh, recommends bandages of flannel rolled round the limb in Rheumatism, so as to compress it completely from below upwards. They are at first tightly rolled, then loosened and well rubbed, when the bandages are again applied. The warm bath was also used at the same time. The late Dr.

David Hosack, of New-York, also speaks highly of this practice. (1)

Acupuncturation.—This agent, once so extensively employed for almost every painful affection, has also been used for the cure of Rheumatism, and especially chronic Rheumatism. Acupuncturation was known in China as far back as history extends; and according to Vicq d'Azyr, very extensively used. It is called by the Chinese *zin king*, or needle pricking, and is regarded as one of the most important remedial agents. It is only within a century and a half that this operation has been known in Europe. The process consists in piercing the painful parts with a delicate needle, and suffering it to remain a longer or shorter time, as may be necessary. The pain is generally easily tolerated, and passes away when the needle is drawn out or forced deeper. The operation, as a general rule, is said to be most successful, when it occasions the least pain.—When it is productive of benefit, relief is speedily experienced. Berlioz, M. Bretonneau, M. Velpeau, and many others, have practiced this operation in a large number of cases, and speak highly of its success. Mr. Churchill, of London, adds his testimony. (*Treatise on Acupuncturation*, London, 1828.) Of 42 cases treated in St. Thomas Hospital by Dr. Elliotson, 30 were cured; the remaining 12

(1) New York Physical Journal, vol. 8, p. 37.

were more acute, and yielded to antiphlogistics. (1) Of 129 treated by Cloquet, 85 were cured. Some explain the relief on the principle of counter irritation; others on electric action. It is scarcely possible that a remedy which has received such varied trial and success in the hands of such men as Cloquet, Majendie, Velpeau, Elliotson, and several in our own country, should be entirely useless. I applied it in one instance to the Spine, and the result was the same as from cupping, or other counter irritation; it gave immediate relief. "It should never be practiced in cases attended with general febrile irritation, or in inflamations approaching the acute character." *(Eberle.)* A further and more full notice, is condensed in a little treatise translated from the French, by Franklin Bache, M. D., entitled, "A memoir on Acupuncturation, drawn up under the inspection of M. Julius Cloquet, 1825," &c.—or what is perhaps more accessible to most, Dungleson's New Remedies, which contains an able notice of this agent. (2) *Electro Puncturation* has succeeded in cases, after ordinary acupuncturation repeatedly performed had failed. *(Graffe, Eberle, &c.)* The operation consists in inserting two needles and connecting them with the opposite poles of a weak galvanic pile. Instead of applying both needles in the apparently diseased part, one should be inserted in the part affected

[1] Med. Chir. Transactions, vol. xiii, p. 467.
[2] See also, Cyclopedia of Pract. Med., article acupuncturation.

and the other at the origin of the nerves in the back, which are distributed to that part.

A modern, and I think a much more useful remedy, is *Electro Magnetism*. It should be applied in the same manner. A very neat and portable apparatus for this purpose is sold by Mr. Pike, (294 Broadway, New-York,) for $13.

After what has been said on the treatment of chronic Rheumatism in general it can hardly be necessary to dwell on the management of each variety at any length.

In *Lumbago* and *Sciatica* the application of revellants will always be found useful, and cupping the lumbar and sacral region, again and again, will give evident relief. Some prefer more sudden and powerful impressions, such as the *moxa*. I have found repeated cupping, and ammoniated counter irritants, cantharides, &c. sufficient. Acupuncturation is recommended in these forms of Rheumatism by several American writers who disbelieve in its connection with Spinal irritation. *(Gallup, Dungleson, &c.)* Dr. Moore, Physician in the New-York Hospital, 1824, employed it sometimes without effect, but often with benefit, both on others and himself. (1) Dr. Moore, however, does not state that it was applied to the loins.

Some depend mostly on spirits of turpentine for the cure of lumbago and sciatica. Eberle

[1] New-York Med. and Phys. Journal. 1825. p. 90.

considers it "among our most efficacious remedies. Home cured five out of seven cases of sciatica with it; the dose was from 20 to 30 drops, frequently repeated. M. Martinet recommends it in scruple doses in sciatica, and attaches considerable importance to the form of administration. It should be combined with gum or aromatic infusion, to guard the mucus membrane of the intestinal canal against its direct application.—*Campet* states among other cases, that he cured himself in 20 days of a sciatica of 18 months standing, by blisters applied to the calf of the leg and thigh. (1) The same remedy applied to the heel has been employed successfully; also the actual cautery, applied between the little toe and the one next to it. A similar treatment is mentioned by Armstrong, viz: an issue between the head of the fibula and the anterior Spine of the tibia.

Pleurodynia requires no separate notice; the applications should be to the dorsal vertebræ, and the general remedies as in other cases.

Rheumatic Dermalgia is described under the head of Rheumatism. It consists in extreme tenderness of the skin, usually of the head and lower extremities; often worse at intervals, and generally worse at night. This is simply Spinal irritation, and a poultice of hops, or hops and mustard to the Spine, will generally cure it in a few hours; if this fail more active irritation will cure.

(Traite Practique des Maladies Graves des Pays Chauds, par Pierre Campet, &c., Paris, 1812; p. 184.

Rheumatic pains as a sequel of syphilis, require, if severe, calomel and opium, given until an impression is made on the system. Some prefer corrosive sublimate and sarsaparilla. If the pains are mild, an occasional dose of calomel, and in the mean time quinine, sarsaparilla and opium, will be found a good course. The *Muriate of gold* has been used, but has now fallen into disrepute. But we should not forget that what is sometimes termed *Syphilitic Rheumatism*, may be a *mercurial* affection, brought on by the indiscreet use of the medicine, and requiring a very different treatment.

Rheumatism of the wrists and ankles, as a sequel of scarlatina, is spoken of by Stewart and Armstrong. Stewart recommends the usual treatment, for other forms of Rheumatism. (1) I have seen several of these cases, and they yielded immediately to cupping, &c., of the Spine. In each of them there was a dry constricted state of the skin, and tenderness of the affected joints, which were painful on pressure, as also the corresponding vertebræ. Elliotson merely mentions the disease, (2) but without describing either the symptoms or treatment. It cannot certainly be of very frequent occurrence. It is described, however, by several writers, as seen during the prevalence of epidemic scarlet fever. (Dr. James Stark, Dr. Craigie, Dr. Cock, Dr. Alexander Murray, Ed. Med. & Surg. Jour. 1836.)

[1] A Practical Treaties on the diseases of children, by James Stewart, M. D., New York, p. 423.
[2] Practice of Medicine, p. 397.

Crick in the neck is also described as a species of Rheumatism. "It is generally brought on by exposing the part to a draught of air, and at times by turning the head suddenly round." *(Dungleson.)* Anodyne frictions and warm applications are advised. A few years since, I had a patient who had suffered frequent attacks of this affection for several years. He had tried a multitude of different remedies, without much relief. It yielded to temperate diet, counter irritation to the cervical vertebræ, and a daily aperient composed of com. extract of colocynth and calomel.

Crick in the back is a similar affection.

For *Rheumatic paralysis*, Dr. Bird recommends electricity or galvanism, by taking shocks from along the Spine. *(Guy's Hospital Reports.)*

For the cure of *contracted tendons*, *stiff joints*, *&c.* from long standing and obstinate attacks of Rheumatism, the thermal spings, (in connexion with other remedies) have been highly esteemed; especially the warm and hot springs of Virginia.—If the tendons are permanently contracted, yet the joint sound, tenotomy affords a probable cure.

Should *suppuration* occur, the treatment would be the same as for suppuration under other circumstances. As a local remedy tinct. of iodine, diluted, has of late been recommended as an injection into the joint. *(M. Bonnet.)*

Other *general* remedies than those already mentioned have been employed by different physi-

cians, and in obstinate cases are worthy of trial. *Arsenic* in the form of Fowler's solution in doses of 2 or 3 drops, three or four times a day, increased to 8 or 10 drops, *(Bardsly, Elliotson, Dewees, Armstrong, Potter,)* is no doubt often useful.

Nitre is highly recommended by Dewees. "It will," he says "rarely fail to afford relief, should it fail to effect a cure." His prescription is

Sal. Nitre.	1 oz.
Sp. Vin. Camph.	1 oz.
Aqua Font.	1 1-2 lb.

Dose, a wine glass full three or four times a day. If this purge too much, diminish the dose; if too little, increase. *Sulphur*, both in small and aperient doses has been useful, when persevered in. *(Dewees, Law, Eberle, Graves, Chapman.)*—*Aconite, veratrine, delphine*, have been used as internal remedies, but seem more effectual as external applications. *(Turnbull, &c.)*

Cod liver oil, (oleum jecinoris aselli) has been recently extolled by several writers. *(Moll, Percival, Brefeld, Spiritus, Kopp, Rust, Schenck, Gunther, Moring, &c.)* It must be persevered in for some time, in doses of one to three table spoons full daily; the following is said to be a good form:

Ol. jecinoris aselli,		
Vini Albi,	a. a.	4 oz.
Gum Acac.		1 oz.

make an emulsion, to which add

Syrup cort. aurant.	1 oz.

Dose, two table spoons full two or three times a day. Brefeld says the cod liver oil has no efficacy in gouty Rheumatism, and Macintosh says it has no efficacy in any Rheumatism. I have never used it.

Iodide of potassium has been used to considerable extent. Some recommend small doses in solution, as

Potass. iodide,	1 dr.
Aqua distil.	1 oz.

Dose, 10 to 15 drops three times a day; others recommend it in substance, in doses of 5 gr. to 1 scruple. Dr. Graves recommends it from personal experience. He took 15 gr. daily, dissolved in sarsaparilla syrup. He says, "The benefit I derived was perceptible hourly, and was so rapid that in four days all traces of the lumbago were gone." (1) *Iodide of potassium* is said to be particularly useful in syphilitic Rheumatism. *(Williams, Watson, &c.)*

The *Blood Root* (sanguinaria canadensis) is a favorite remedy with several practitioners in the eastern states, and is without doubt applicable to many cases.

Narcotism, by opium, as used in the acute form, is also advised by Levrat, Cazenave and others. I tried this remedy some years since, and before my attention was directed to the Spine, in a case of sciatica of some years standing. I first tried

[1] Dublin Journal of Med. Science. Nov. 1840. p. 245.

turpentine, in small doses, and also as recommended by M. Martinet; this produced violent strangury, but did not even relieve the Rheumatism. The next attack, after cathartics, I resorted at once to opium. He first took half a drachm of black drop every two hours, and then 1 drachm every two hours until narcotism was produced. This required five doses. It gave him sufficient ease to resume his work in much less time than usual. The pain, however, never left entirely until about six months afterwards, when I cured it by cupping the Spine.

Oil of Savin (Juniperus Sabina, folia) has been extensively used as a stimulating diaphoretic, and is strongly recommended by Chapman: more especially when there is a want of tone in the system.

Buchu leaves (diasma crenata, folia) are much used at the Cape of Good Hope for different diseases. Professor Jackson says they are useful in chronic Rheumatism. They may be given in tinct. or infusion.

Indian Hemp. (Cannabis Indica—Apocynum Cannabinum.) This remedy was first introduced into notice in England by Dr. O'Shaughnessy, who experimented extensively with it in Calcutta. Mr. Ley subsequently published numerous facts confirming the statements of O'Shaughnessy. Still subsequent to this, Dr. Clendinning wrote on the

medicinal properties of hemp. (1) All agree that it acts as a most valuable anodyne, without producing subsequent unpleasant effects. It has no astringent properties. Dr. C. B. J. Williams mentions its utility in Rheumatism, and relates several cases of long standing in which it was of great benefit. (2) Other articles have been more or less used with varied success. A correct knowlege of their properties and mode of action will be a sufficient guide as to the condition in which they may be safely employed.

In all cases, the individual subject to chronic Rheumatism should be protected from sudden changes of temperature—from damp and cold, by the use of flannel next the skin. The stomach and bowels should be kept in healthy action. Nourishing food of a good quality should be used, and that *moderately*. Idle or dissipated habits should be strictly forbidden. Excess of every kind should be avoided; for remedial means will scarcely be of permanent utility unless strict attention is paid to the diet and habits. As a prophylactic I know of nothing better than the frequent use of the cold shower bath.

[1] Observations on the Medicinal properties of the Cannabis Sativa of India, by John Clendinning, M. D, F. R. S., &c. &c.
[2] London Lancet. 1843. p. 242.